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No. 1971

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CONDITIONS FOR COOPERATION IN PRODUCTION AMONG CEMA ORGANIZATIONS

Sofia DURZHAVEN VESTNIK in Bulgarian 11 Dec 79 pp 1017-1024

[Council of Ministers: General conditions for production specialization and cooperation among CEMA-member countries (OUSK SIV) (approved with Decision No 23 of the Council of Ministers Bureau dated 9 February 1979, effective as of 1 January 1980)]

[Text] Section I

General Stipulations

#1

1. The present general conditions shall be appended to the civil legal multilateral contracts for production specialization and cooperation concluded among the organizations of more than two CEMA-member countries.
2. In drafting the contract, should the parties reach the conclusion that, as the result of the specific nature of the contracted for item, some stipulations may deviate from the present general conditions, they may so stipulate in the contract.
3. The present general conditions may apply also to civil legal contracts concluded between the organizations of two CEMA-member countries, based on a bilateral stipulation.

#2

The terms used in the present general conditions shall mean as follows:

"Contract" -- Contract for production specialization and cooperation;

"Party," or "Another party"--based on specific content of the stipulation, meaning both "parties" and "other parties;"

"Creditor" -- The country with an account receivable;

"Debtor" -- The country which must satisfy the account receivable of the creditor;

"Specialized Goods"-- Types or groups of finished goods, semifinished goods, assemblies, parts, complementing goods, and stages of technological processes subject to production specialization and cooperation;

"Contract"--Any contract in civil law included in the execution of the contract;

"Delivery contract"--A contract for a foreign trade sale (delivery).

Section II

Parties to the Contract

#3

1. Parties to the contract may be economic organizations subject to civil law and granted the right to conclude such contracts in accordance with the legislation of the country in which they are located.
2. Economic organizations without the right to engage in foreign trade operations may participate in the contract together with organizations which have the right to engage in such operations.
3. Should the rights and obligations of the economic organizations of a country participating in the contract not be specified, such organizations will be jointly responsible to the other party named in the contract.

Section III

Conclusion, Amendment, and Enactment of the Contract

#4

The contract must contain at least the breakdown of the production of specialized goods for which the following must be indicated:

- a) Technical-economic parameters and quality characteristics;
- b) Delivery amounts and deadlines;
- c) Prices and/or procedure for their setting in accordance with existing principles and methods governing price setting and recommendations of CEMA organs.

1. The treaty will be considered as signed in the following cases:

a) Among attending parties: at the time of its signing by the parties;

b) Among absent parties--at the time they have received from the organization which has assumed the function of organizing the conclusion of the contract the latest communication on the acceptance of the draft contract without stipulations, should the contract be signed on the basis of a jointly formulated draft or at the time of receiving such a communication from the offering party should the contract be concluded on the basis of the proposal submitted by one of the parties.

2. The communication on the acceptance of the draft contract or the proposal for the conclusion of a contract shall be considered as conducted on time if received by the organization stipulated in b) of Item 1. of the present paragraph within the time stipulated between the parties or indicated in the proposal; if the term has not been stipulated among the parties or indicated in the proposal, it shall take place within 90 days as of the day of the final formulation of the draft or the sending of the proposal.

3. If a communication received with a delay shows that it was sent before the expiration of the deadline stipulated in point 2. of the present paragraph, the communication shall be considered as late only if the proposing country immediately notifies the other country that it will be received with a delay.

4. The proposal binds the proposing country unless it contains a stipulation to the contrary or unless the communication of its withdrawal has not been received by the other party before it has been received or has been received at the same time with it.

5. The acceptance of the proposal may be withdrawn in accordance with the procedures stipulated for the withdrawal of proposals in point 4. of the present paragraph.

6. The following shall be considered new proposals:

a) A proposal accepted with a delay;

b) An answer to a proposal containing an amendment and/or a supplement to the proposal.

7. The organization stipulated in b) of point 1. of the present paragraph must inform the parties of the date of conclusion of the contract within 10 days following its conclusion.

8. The parties may agree on a different contract conclusion procedure.

#6

1. The contract, proposal, and acceptance of the proposal shall be effective if presented in writing.

2. Telegraph and telex communications shall be considered as presentations in writing.

#7

All appendices to the contract stipulated in it or referred to it shall be considered an indivisible part of the contract.

#8

In the conclusion of the contract between absent parties the place of conclusion shall be the place where the communication accepting the proposal was received.

#9

As of the time of conclusion of the contract the entire preceding correspondence shall be no longer considered pertinent unless otherwise stipulated in the contract.

#10

1. Unless otherwise stipulated in the contract, it shall be effective as of its day of conclusion.

2. If according to the legislation of the state should only one party to the contract require its ratification by a competent state organ, the contract shall be enacted as of the day of the final required approval, unless another deadline has been agreed upon between the parties.

3. The party in whose country the country has to be ratified must:

- a) Enter the proper stipulation in the contract;
- b) Take all the necessary measures depending on it to ensure ratification;
- c) Immediately inform the other party or organization which has assumed the function organizing the conclusion of the contract of the decision of the competent state organ concerning ratification or the lack of decision within the time stipulated in point 4. of the present paragraph.

4. Should the contract fail to be approved as per point 2. of the present paragraph over a period of 3 months from the date of its conclusion or within any other stipulated period of time, or else should the contract be approved with reservations, it shall be considered as inactive.

Any one of the parties may submit proposals for supplementing or refining the contract pertaining, for example, to delivery amounts and deadlines as stipulated in the long-term trade agreements and their annual protocols.

#12

The stipulations of the present section shall apply to contract amendments and supplements as well.

Section IV

Rights and Obligations of the Parties

#13

The specialized party must:

1. Ensure the production of the specialized goods to meet the requirements of the nonspecialized party in accordance with the technical-economic parameters and quality characteristics, volumes, deadlines, and procedures stipulated in the contract.

2. Meet the requirements of the nonspecialized country for specialized goods in volumes exceeding those stipulated in the contract, within the limits of its possibilities (including the satisfaction of domestic requirements, meeting previously assumed export obligations, etc), as well as in accordance with the additional stipulations related to amounts, deadlines, and other conditions. In such cases the interests of the other party to the contract must not be violated.

Unless the contract stipulates another deadline requests for additional requirements must be submitted no later than the first quarter of the year preceding the year of the delivery.

3. Continually perfect specialized output, and ensure the enhancement of its quality and technical standards on the basis of achievements and progressive trends in the development of world science and technology in the specific areas, as well as practical experience gained in the course of the use of such commodities by the consumer, bearing in mind the need to raise their competitiveness on the world market in terms of all indicators. It must inform the parties to the treaty of improvements in the specialized goods before their utilization.

Should improvements in the specialized goods result in changes in the contractual stipulations they must be agreed upon in advance in accordance with the procedure stipulated in the present general conditions for contract amendments.

Improvements in specialized goods may be agreed upon among the interested parties providing that this will not violate the interests of the other parties to the contract.

4. Ensure the checking (testing, analysis, examination, etc., depending on the type of goods) of prototypes of new or improved specialized goods and submit the corresponding documents to the nonspecializing party.

5. Submit to the nonspecialized party, according to the stipulations of the contract or in accordance with the contract, production-technical experience, knowledge, information on the specific characteristics of the specialized goods and the specific conditions for their use, as well as other information based on the type of the goods in amounts which enable the nonspecialized party to use the specialized goods for the purposes stipulated in the contract.

6. Ensure the juridical impeccability of the specialized goods and/or the submitted scientific and technical results regarding industrial property rights belonging to third parties in the country of the nonspecialized party and in all countries stipulated by the parties, thus enabling the nonspecialized party to use such goods and results, in accordance with the objectives of the contract and the agreed upon stipulations.

7. Ensure that the specialized goods meet the mandatory stipulations regarding labor safety, technical safety, environmental protection, and/or other technical sanitary-hygienic and other similar stipulations in effect in the country of the nonspecialized party.

If the contract does not contain instructions on mandatory stipulations enacted in the country of the nonspecialized party, or else should the nonspecialized party fail to fulfill its obligations as per point 7. of #15, the specialized party shall be guided by the stipulations enacted in its country.

8. Ensure at the request of the nonspecialized party, under stipulated conditions, the training of its specialists in the utilization of the specialized goods.

#14

Based on the type of the specialized goods such as, for example, should the contract deal with machines, apparatus, equipment, and other similar goods, the specialized party is also obligated:

1. To ensure the production of spare parts needed for the normal operation of the specialized items with a view to meeting the requirements of the nonspecialized party for such spare parts within the stipulated amounts and deadlines, guided by the corresponding stipulations of the enacted general principles on ensuring spare parts for machines and equipment delivered in the course of the reciprocal trade among CEMA-member countries and Yugoslavia.

2. To ensure under stipulated conditions the implementation of installation projects and/or to assist in the technical servicing of the specialized goods.

#15

The nonspecialized party must:

1. Ensure that its requirements for specialized goods are met in accordance with the technical and economic indicators and quality characteristics, amounts, deadlines, and procedures stipulated in the Contract.

2. Should the contract stipulate that the nonspecialized party has the obligation to terminate and/or not reorganize within the term of validity of the contract the production of specialized goods, the contract must stipulate the corresponding conditions and deadlines. The nonspecialized party is not obligated to terminate the production of specialized goods prior to the initialling by the parties of a protocol on the full satisfaction of the requirements of the nonspecialized party for such goods, including requested additional needs based on technical-economic indicators and quality characteristics, amounts, deadlines, and terms stipulated in the contract.

3. Submit to the specialized party, under the conditions stipulated in the contract, available technical documentation, production-technical experience, knowledge, and other information based on the nature of the specialized goods, required for their utilization or contributing to upgrading the technical standard and quality of the specialized goods and the effectiveness of their production.

4. Take all possible measures to grant to the specialized party the possibility to use, under stipulated conditions, the rights to industrial ownership enacted in its country for specialized goods within the volume required for their perfecting and marketing as stipulated in the contract.

5. Inform the specialized party of its experience in the utilization of the specialized goods and the suggested or applied improvements which enhance the technical and economic parameters and quality characteristics of such goods.

Point 3 of the present paragraph shall apply in cases of delivery of technical documents and production-technical and other information related to said improvements.

6. Inform the specialized country of exclusive rights of its own or of other organizations within its own country or by the country itself, pertaining to the specialized goods and protected in accordance with the stipulated procedures in third countries, as well as the existence of licenses issued on the basis of such rights.

7. Inform the specialized party in accordance with the procedure and deadline stipulated in the contract of the content of the mandatory stipulations enacted in its country governing specialized goods in terms of labor safety, technical safety, environmental protection, and/or technical, sanitary-hygienic, and other similar stipulations.

If the procedure and deadlines for the sending of such information have not been stipulated in the contract, it must be submitted by the non-specialized party within a technically substantiated time but not later than the initialing of the contract for the delivery of the specialized goods to which such information pertains. In such cases the parties shall coordinate the necessary contract amendments.

#16

In accordance with the contract or its corresponding stipulations, within the range of their possibilities the parties must cooperate with each other in conducting scientific and technical research and design projects aimed at improving the technical-economic and quality characteristics of the specialized goods.

#17

Unless otherwise stipulated in the contract, the party must keep secret the technical documentation, scientific and technical results, production-technical experience, knowledge, and other information, including information of the "know-how" type obtained from the other country or learned in the course of the cooperation process.

The publication of such information or its dissemination by other means, its submission to third parties, including after the termination of the contract, may not take place other than according to the procedure stipulated in the contract or on the basis of a special agreement among the parties.

#18

Should a party to the contract decide to terminate the effect of the protective document prior to the expiration of the protection term, it must inform the other interested party of this fact at the proper time and, at the latter's request, deliver to it this document under stipulated conditions.

The expenditures related to the releasing of rights shall be borne by the party assuming such rights.

#19

Should industrial property rights for specialized goods be violated by third parties affiliated with one of the parties, the other party must inform of the fact the party whose rights have been violated and, in accordance with stipulated conditions, provide it the necessary assistance for the protection of its rights.

#20

The parties to the contract are obligated to take all the necessary measures within their power to include the amounts of deliveries of specialized goods, as stipulated in the contract, in the long-term trade agreements and their annual protocols.

#21

All deliveries of specialized goods shall be based on contracts concluded by organizations empowered to engage in foreign trade operations.

#22

1. The parties to the contract must ensure the signing of contracts for the delivery of specialized goods in accordance with the contractual stipulations.

2. Unless otherwise stipulated in the contract:

a) The organization in the specialized party participating in the contract and empowered to engage in foreign trade operations must submit to the other party a proposal for the conclusion of a contract for the delivery of the specialized goods by no later than the second quarter and, for the supply of machinery and equipment manufactured on an individual basis, no later than 1 April of the year preceding the year of the delivery;

b) The answer to the proposal for the conclusion of a contract must be given by the organization of the specialized party with the right to

engage in foreign trade operations no later than 30 days following the date of the submission of the proposal;

c) Should the answer to the proposal contain new proposals the organizations among which the contract is to be signed must reach an agreement on any discrepancy within 45 days from the date of the issuance of the answer by the organization which is the recipient of a proposal for the conclusion of a procurement contract.

3. Should the proposal contain stipulations inconsistent with the contract, for which reason it is rejected by the other party, the proposal shall be considered as nonsubmitted. This stipulation shall apply to the answer to the proposal as well.

#23

The organization of the nonspecialized party participating in the contract and with the right to engage in foreign trade operations must immediately inform the corresponding organization of the specialized party of any demand for the delivery of specialized goods received from third countries and, in accordance with the procedure stipulated in its own country, take the necessary measures so that such information may be sent out should requests be received from other organizations within its own country.

Section V

Liabilities of the Parties

#24

1. The parties shall be held physically liable for the nonimplementation or improper implementation of obligations they have assumed in accordance with the contract.

2. Unless the contract stipulates otherwise, the party which has involved a third party in the implementation of its obligation shall be answerable to the other party for the nonfulfillment or improper fulfillment of the obligations of the third party as if they were its own.

3. The forms of physical liability shall be the following:

- a) Payment of a fine;
- b) Compensation for damages.

4. Unless otherwise stipulated in the contract according to which a penalty is provided for in accordance with the present general conditions no damages shall be compensated.

5. Unless the contract or the present general conditions stipulate otherwise, in cases in which the nonfulfillment or improper fulfillment of contractual obligations also represent a violation of the contractual stipulations, the existence of grounds for liability based on the contract shall exclude the right to submit corresponding claims directly stemming from the contract.

#25

1. In the cases stipulated in the present general conditions or the contract, the debtor must pay the creditor a penalty for the nonfulfillment or improper fulfillment of contractual obligations.

2. The right of the creditor to demand payment of a fine stems from the fact of the nonfulfillment or improper fulfillment of the debtor's obligations.

3. The arbitration authority does not have the right to lower the amount of the fine should a request for its payment have been made in accordance with the present general conditions.

4. Should the full or partial nonfulfillment or improper fulfillment of obligations be the result of the creditor's failure to provide the proper assistance to the debtor to carry out his obligations or of other improper activities on the part of the creditor in carrying out the obligation, the umpire has the right to refuse to satisfy entirely or partially the creditor's claim for a penalty based on the extent to which the improper behavior of the creditor has influenced the fulfillment of the debtor's obligation.

5. If the stipulated fine is to be paid for each day of delay, it shall be computed for each beginning day of the delay.

6. The payment of the fine for a delay or for any other improper implementation of contractual obligations shall not relieve the debtor from the fulfillment of the corresponding obligations.

#26

1. Should the conclusion of the delivery contract be delayed past the deadline stipulated in the contract or defined in accordance with #22 of the present general conditions, the party which has violated the obligation shall pay a fine to the other party based on the value of the goods to be covered by the contract.

2. Unless otherwise stipulated in the contract, the fine shall be computed as of the first day of the day in the following amounts:

- a) For the first 30 days: 0.05 percent per day;
- b) For the next 30 days--0.08 percent per day;
- c) After that: 0.12 percent per each day of delay.

3. The overall amount of the fine stipulated in point 2 of the present paragraph may not exceed eight percent of the value of the goods to be covered by the contract.

4. The party which has refused to sign a delivery contract shall pay to the other party a fine totaling eight percent of the value of the goods for which it has refused to sign a contract, including the penalty for delay in the conclusion of the contract for such goods, should such penalty be owed and has already been computed or paid.

#27

1. Unless the contract stipulates another deadline, should the delay in the conclusion of the contract exceed four months, the waiting party has the right to revoke its obligation to sign the contract.

2. The party victimized by the violation of the obligation to sign the contract has the right to renege on its obligation to conclude it even before the period stipulated in point 1 of the present paragraph has expired, should it be informed in writing by the party which has violated its obligation that it shall not sign the contract within that period.

3. The stipulations of point 1 of the present paragraph shall not apply in the case of complete plants or installations. The period for refusal of the obligation to conclude the contract shall be agreed upon between the parties to the contract for each separate case.

#28

1. The debtor must compensate the creditor for damages caused as a result of the nonfulfillment or improper fulfillment of the contract if no penalty is stipulated for the nonfulfillment or improper fulfillment of obligations.

2. In accordance with the present general conditions the costs of the creditor, or the loss or damage of his property are subject to compensation. Unearned profits, indirect damages, and the amounts of fines paid by the creditor to the co-contractor on its own side, in accordance with national legislation and/or economic contracts, shall not be subject to compensation.

3. The obligation to compensate for damages shall arise in the simultaneous presence of the following circumstances:

- a) Nonfulfillment or improper fulfillment of contractual obligations;
- b) Should the nonfulfillment or improper fulfillment of contractual obligations become the reason for causing property damage to the other party;
- c) When a direct causal link exists between the nonfulfillment or improper fulfillment of obligations and the damage caused to the other party;
- d) When the debtor is responsible for the nonfulfillment or improper fulfillment of obligations.

4. The care usually shown in such relations is the criterion used in determining culpability.

5. The burden of proving the existence of circumstances indicated in a), b), and c), of point 3 of the present paragraph and of the size of the damage falls on the creditor. The culpability of the debtor for the nonfulfillment or improper fulfillment of obligations is presumed.

6. The debtor owes no compensation for damages which the creditor could have avoided by displaying the care considered usual in such relations.

7. Unless otherwise stipulated in the contract, compensations are paid for one-half of the damages. However, the overall amount of damages subject to compensation may not exceed 50 percent of the value of the specialized goods involved in the violation.

8. Compensation for damages caused by delays or other improper implementation of contractual obligations does not relieve the debtor from the implementation of the corresponding obligation.

#29

1. The parties shall bear no liability for partial or total nonfulfillment of contractual obligations should such nonfulfillment be the result of uncontrollable circumstances.

2. Uncontrollable circumstances shall mean circumstances arising after the conclusion of the contract as the result of extraordinary event unforeseen and unforeseeable by the party.

3. The parties shall be relieved from responsibility for the partial or total nonfulfillment of contractual obligations also if so stipulated in the contract.

4. The debtor shall bear the responsibility of proving the circumstances which release him from his responsibilities.

#30

1. The party unable to fulfill its contractual obligations due to the circumstances indicated in #29 must immediately inform the other party in writing of the advent of such circumstances within the time for the implementation of the contractual obligations. Such information must include data on the advent and the nature of the circumstances and their possible consequences. The party must immediately inform the other party in writing should such circumstances come to an end.
2. The circumstances which release the party from responsibility for the full or partial nonfulfillment of the contract must be certified by the Chamber of Commerce or any other competent central authority of the respective country.
3. The failure to inform or the submission of delayed information by the party which had found it impossible to fulfill its contractual obligations of the advent of circumstances releasing it from its liability trigger the obligation to compensate for damages caused by such lack of or delayed information.

#31

1. In the cases stipulated in #29 the deadline for the fulfillment of contractual obligations may be extended in accordance with the period during which such circumstances and their consequences are present.
2. Unless the contract stipulates another term, should such circumstances and their consequences remain effective for over 12 months each of the parties has the right to refuse the further fulfillment of the contract to the extent to which it has been affected by such circumstances and/or their consequences. In such cases the parties have no right to submit claims against each other based on this refusal.

The party may use its right to refuse the contract by announcing its refusal before the other party has begun to fulfill its corresponding contractual obligation.

Section VI

Claims

#32

Before addressing itself to the arbitration authority, the party must submit a claim to the other party.

1. Claims for the payment of penalties must be submitted within not later than three months. This period begins to run as follows:

- a) For fines computed by the day, as of the day of the implementation of the obligation or the day at which the fine has reached its maximum amount, providing that the obligation was not met prior to that day;
- b) For fines to be computed on a one-time basis only--as of the day of the validity of the claim.

2. The nonsubmission of claims for the payment of fines within the time stipulated in point 1 of the present paragraph deprives the claimant of the right to appeal to the arbitration authority.

1. The following information must be mandatorily contained in the claim:

- a) The title of the contract and the date of its conclusion;
- b) The name of the party against which the claim is filed;
- c) The name of the specialized goods according to the contract for which a claim is filed and/or the content of the obligations related to the non-fulfillment or improper fulfillment for which the claim is filed;
- d) Description of the claim;
- e) Claim and/or account for the computed fine which may also be included in the bill added to the claim.

2. Should any of the data stipulated in a) to e) of point 1 of the present paragraph be missing, the recipient of the claim must immediately inform the claimant of the data to be added to the claim. Should the recipient of the claim fail to meet this obligation it forfeits its subsequent right to refer to the incompleteness of the claim.

3. Should the claimant demanding a fine receive the information stipulated in point 2 of the present paragraph, given by the recipient of the claim at a time when the term for filing a claim as per #33 has elapsed or is to elapse in the 10 following days as of the date of the receipt of the communication, the claimant has the right to add the required data in the course of the 10 days following that date, regardless of the expiration of the term for filing a claim.

The stipulations of this point shall also apply to the submission of claims on other grounds if so stipulated in the contract.

4. In the cases stipulated in points 2 and 3 of the present paragraph, the period for consideration of the claim as per #35 shall start as of the date that the claimant has obtained the additional data for completing the claim in accordance with point 1 of the present paragraph.

#35

1. The recipient of the claim must consider it and immediately answer the claimant on the substance of the claim (express its agreement or refusal to meet it fully or partially), but within the time stipulated in the contract. Should the contract fail to stipulate such a period the basic answer on the claim should be provided immediately, but no later than 90 days; in the case of a claim for the payment of a fine, in the course of 60 days from the date of receipt of the claim.

2. Should the recipient of the claim fail to provide a basic answer to the claim within the time stipulated in point 1 of the present paragraph, and the claimant addresses himself to the arbitration authority before obtaining the answer, regardless of the outcome of the case the arbitration costs shall be borne by the country which has failed to answer the claim. The stipulations of this point shall not apply to the cases stipulated in point 3 of the present paragraph.

3. As the result of technically substantiated reasons, should the recipient of the claim be unable to provide a basic answer within the time stipulated in point 1 of the present paragraph, it may propose to the claimant to extend the deadline for a specified period.

4. Should the claimant reject the suggestion of the recipient of the claim to extend the period for a basic answer and turn to the arbitration authority, the question of arbitration expenditures shall be resolved by the arbitration authority in accordance with the outcome of the case.

5. Should the claimant agree with the recipient of the claim to extend the deadline for a basic answer to the claim, but should the recipient of the claim fail to answer within the agreed upon time, and should the claimant turn to the arbitration authority, the arbitration costs shall be paid by the party which has failed to provide an answer on the basis of the claim, regardless of the outcome of the case.

#36

Should a party appeal to the arbitration authority before receiving the answer of the other party on the basis of the claim and before the expiration of the time for answering the claim, as stipulated in #35, the arbitration costs will be borne by the claimant regardless of the outcome of the case.

#37

1. Claims must be submitted in writing either by registered letter or delivered to the recipient of the claim.

2. Claims may be made by telegram or Telex. In such cases they must be confirmed with a registered letter no later than seven working days following the date of the presentation of the claim by telegram or Telex.

Section VII

Lapsed Prescription

#38

The lapsed prescription stipulations contained in this section shall apply to debts based on relations regulated on the basis of the present general conditions.

#39

The term of the lapsed prescription for additional claims shall lapse with the expiration of the term of the lapsed prescription for the principal claim.

#40

1. The general term for a lapsed prescription shall be two years.
2. A special one-year term for a lapsed prescription shall apply to penalty payment claims.

#41

1. The general term of the lapsed prescription shall begin to run as of the time that the right to a claim has appeared.
2. The special term for the lapsed prescription for penalty claims shall begin to run as of the day following the day that the claimant has received the basic answer from the other party; should the basic answer to the claim fail to be given by the other party within the stipulated deadline, it will begin to run one day after the day during which the answering deadline has lapsed.

#42

The term of the lapsed prescription shall be interrupted should an uncontrollable circumstance have prevented the filing of the claim, a circumstance which has appeared or has remained valid during the prescription term. The time for which the prescription lapse has been inoperative shall not be included in the prescription time.

#43

1. The prescription lapse term shall be interrupted in the following cases:
 - a) Following the filing of a request for arbitration;
 - b) Following the acknowledgement of the claim by the debtor, in writing.
2. The lapsed term shall be resumed following the interruption.
3. Should the claimant withdraw his request for arbitration the term for a prescription lapse shall not be considered interrupted.

#44

Should the debtor meet his obligation following the lapse of the prescription, he forfeits the right to a refund even though at the time of the fulfillment he was not aware of the lapse of the term.

#45

Claims for which prescription time has lapsed may be filed by agreement between the parties.

#46

The lapsed prescription is applied by the arbitration authority if requested by the debtor.

#47

No deviations from the stipulations of this section shall be allowed.

Section VIII

Termination of the Contract

#48

The contract shall be terminated:

1. With the lapse of the stipulated period of validity;
2. By the parties' agreement;
3. As the result of a unilateral annulment of the contract.

#49

No unilateral annulment of the contract or part of the contract shall be allowed unless otherwise stipulated in the present general conditions or in the contract.

#50

1. A unilateral annulment of the contract must be submitted in writing.
2. Unless the contract stipulates another period of time, the unilateral annulment shall be effective within four months from the date of the written communication of the unilateral annulment.
3. Should the other party consider that the unilateral annulment of the contract is unjustified, it may appeal to the arbitration authority within the period stipulated in point 2 of the present paragraph. Should it fail to do so, it forfeits the right to subsequently appeal to the arbitration authority on the matter of the unjustified unilateral annulment of the contract.

#51

The termination of the contract does not entail the automatic termination of the agreement to fulfill it, unless otherwise stipulated in the contract.

#52

The secrecy and other obligations directly stipulated in the contract remain effective in the termination of the contract, bearing in mind the stipulation of #17.

Section IX

Arbitration

#53

All disputes possibly arising from or in relation to the contract shall be considered by the arbitration court of the chamber of commerce of the defendant's country or, with the agreement of the parties, in a third country which is a member of the convention on the resolution of civil rights disputes through arbitration, stemming from relations based on economic and scientific and technical cooperation of 26 May 1972 and in accordance with the convention.

Section X

Law Applicable to the Contract

#54

1. The material law of the country of the specialized party shall govern relations among parties to the contract on matters not settled or

partially settled on the basis of the present general conditions or the contract, unless otherwise stipulated in the contract.

2. Material law as per point 1 of the present paragraph shall mean the general stipulations of civil law rather than special stipulations governing relations among socialist organizations and enterprises in the respective countries.

Section XI

Other Stipulations

#55

1. The period of validity of the contract shall be determined by the parties on the basis of its object and purposes, bearing in mind the expediency of establishing such relations over a long-term period.

2. The validity of the contract may be extended in writing and, unless otherwise stipulated in the contract, in accordance with the procedure governing its conclusion. If necessary, the parties shall stipulate the conditions governing the extension of the contract's effectiveness.

#56

1. The parties shall have no right to transfer the contractual rights and obligations to third parties without the written agreement of the other side.

2. The stipulations of point 1 of the present paragraph shall not apply should the rights and obligations stemming from the contract be transferred, by decision of a competent state authority, to another organization of the same country.

3. The organization which shall be a party to this contract as per points 1 and 2 of the present paragraph must immediately inform in writing all other contracting parties of said transfer.

#57

1. The term, computed in days, shall begin to lapse as of the day following the event which is considered decisive in terms of the determination of the deadline.

2. The end of the term calculated in weeks, months, or years, shall end on the day whose name or date shall coincide with the day on which the event took place marking the beginning of the counting of the term. Should this day fail to be the last day of the month, the term will expire on the last day of the month.

3. Should the last day of the term expire on a nonworking day the following working day shall be considered the day of expiration of the term.

#58

Should the parties stipulate the repository for the contract the repository must immediately be given the original text of the contract and all documents related to its conclusion, enactment, amendment (such as extension or addition) and termination.

5003

CS0: 2200

INTERNATIONAL AFFAIRS

COST, CAPACITY OF ADRIA PIPELINE DISCUSSED

Prague RUDE PRAVO in Czech 29 Nov 79 p 7

[Article by Jaroslav Raus: "Which Way Will the Black River Flow"]

[Text] The Day of the Republic falling on 29 November is the biggest Yugoslav holiday. Let us recall it with a reportage that will take us to the island of Krk, where the Adria pipeline will soon be put into operation. It represents one of Yugoslavia's greatest economic achievements.

His Majesty Crude is the subject of concentrated attention in many countries as irreplaceable source of energy so far and basic raw material for petrochemical industry. Thousands of tankers filled with thick black fluid sail across all the oceans of the world. The continents are criss-crossed by crude oil pipelines. The Adria pipeline will undoubtedly be the youngest among them.

Why was it built in the first place?

The answer to this question is simple. The Yugoslav economy consumes more than 16 million tons of crude oil annually. Only one-third of its requirements is covered by domestic production, while the rest must be imported principally from the Arab countries of the Middle East. There have been and still are problems with the transportation of approximately 11 million tons of crude oil from the Adriatic ports which is carried out mainly by railroad tank cars. This was realized with misgivings again during the winter period last year, when railroad transportation was paralyzed. As to the speed, reliability and economy, the construction of the pipeline was the way out.

Participation of CSSR and Hungary

The 750 kilometer long pipeline leads from the island Krk to Sisak, where it ramifies. One of its branches leads through Bosanski Brod, Novi Sad and Panchevo to the domestic Yugoslav refineries on the banks of the Sava and Danube. The other branch turns from Sisak directly to the north.

It is called the international pipeline because on the border it links up to the Hungarian pipeline which continues to Budapest, where it turns toward the Czechoslovak border and ends up in Bratislava.

The average annual crude oil consumption in Czechoslovakia is approximately 18 million tons, while our domestic deposits supply only 200,000 tons of crude oil annually. More than 80 percent of our imports come from the Soviet Union in accordance with the long-term agreements, while the remaining 20 percent are imported from overseas.

Also the CSSR is interested in economically advantageous transportation of overseas crude oil from the harbors to our refineries. For this reason, we signed an agreement with Yugoslavia which contains two customary provisions: Czechoslovakia has contributed with a 25 million dollars credit to the construction of Adria pipeline which will be paid off by the permission to use the Yugoslav section of the pipeline for Czechoslovak refineries. Hungary also has signed a similar agreement with Yugoslavia.

The zero kilometer and starting point of the pipeline will be the small town Omisalj by the bay of Krk island, where a harbor has been built which will receive the only type of commodity--crude oil. From the big tankers two of which will be able to anchor in the harbor at the same time, crude oil will be pumped into the reservoirs on the land with the storing capacity of 740,000 cubic meters of crude oil. The precious liquid will be completely handled by the fully automated pumping station.

The Adria pipeline is a formidable work of engineering. Before the pipes were laid, 3.5 million cubic meters of earth and rock had to be excavated and removed. It crosses rivers and canals at 557 places and many underpasses had to be constructed under the railroad lines and roads. Over the straits separating Krk island from the mainland the pipes had to be put into a 634 meters long two-arch bridge which has already been constructed over the sea. The bridge roadway is not yet completed, but will be opened to automobile traffic on 1 May 1980.

34 Million Tons of Crude Oil Annually

With its cost exceeding 11 billion dinars, the Adria pipeline is one of the most expensive capital projects in Yugoslavia.

Antiquity had its seven wonders of the world, seven most remarkable work of technology and art: the walls of Babylon, the Mausoleum at Halicarnassus, the statue of Zeus by Phidias at Olympia, the hanging gardens of Semiramis and the temple of Artemis at Ephesus among them. This is not an attempt at comparison, but among the "wonders of the world" of our century definitely is the crude oil and gas based petrochemical industry--producer of materials summarily called synthetic which profoundly affect our everyday life in the form of thousands of types of tools and articles, drugs and foodstuffs.

One of such miraculous laboratories of chemistry is being built on the area of one hundred square kilometers on the Krk island. Eight plants are expected to be gradually put into operation by 1983 which will manufacture all those polyethylenes, ethylenes, vinylchlorides and other basic semi-finished commodities for hundreds of Yugoslav processing plants.

All this is related to the Adria pipeline. Its festive opening will signify the beginning of the period in the course of which individual sections will be gradually put into operation. Approximately 34 million tons of crude oil will flow through its pipe system annually.

This is a project which is the manifestation of good cooperation of three socialist countries in harmony with the spirit and letter of conclusions of the Helsinki conference.

8973

CSO: 8112

IMPROPER USE OF ELECTRIC ENERGY RESOURCES CRITICIZED

Tirana ZERI I POPULLIT in Albanian 30 Oct 79 p 3

[Article by Enver Dibra: "The Quality of Electric Energy To Be Evaluated"]

[Text] From one five-year period to the next, the energy industry has foreshadowed the development of other branches of industry and agriculture. This is evident from the following: in the past ten years the new hydroelectric power capacities which have been placed in operation have immediately doubled the output of previous energy resources. This occurred with the "Light of the Party" hydroelectric power plant, a unit with as much power as all other energy resources taken together. Likewise, the construction of hydroelectrical and thermoelectrical power stations has been accompanied by the development of other sectors of electric energy, such as the erection of substations and high tension lines, which permits the parallel connection of all power plants and consumers in the republic, thus creating the country's powerful and unique energy system. Ours is the only electric energy system in Europe which insures the economy's needs for electric energy from internal resources. This is a great victory of the party line and the teachings of Comrade Enver for building socialism with our own resources.

The distribution of loads among power plants and hydroelectric power stations, lines and substations down to the consumer is especially important to the energy system. The stability of the system and the quality of the electricity depend on the distribution or, as is said, on the regimen. However, complete concepts about the quality of energy do not always exist. The quality of energy is one of the major factors which makes it usable. Not only that, the quality of production, especially in the chemical and textile industries, the work regimen in oil production, etc., etc., also depend on the tension and frequency. Those enterprises which, upon analysis of technological defects, do not concentrate their attention on controlling the quality of electric energy are remiss. This comes about because the importance and place of this control are not always correctly understood!

Precisely to increase resistance and improve the quality of electric energy, the regimen group works at the dispatching center of the electric energy system. This group establishes the energy load among hydroelectric and thermoelectric power plants and maintains production quality parameters. Both when produced by thermoelectric power plants and when produced by hydroelectric power plants, every kilowatt hour of energy in the system at all times contains within itself a portion of coal and oil. Thus, the concepts and ideas that, when "water is plentiful," there is no reason to conserve electricity, are wrong. Therefore, energy conservation starts right in the production stage with the requirements for rational loading of resources and the distribution of high quality energy at all times.

In general, the problems of electric energy conservation in the energy system are resolved on a scientific basis. Greater concern is required to conserve electric energy in the communal electric network and by the various consumers because there is room for deep improvements in this field. Enterprises and districts make plans each year to conserve electric energy when the "signal" for this is issued from above. On this occasion, tasks are described in finest detail, such as to reduce lighting to the bare minimum, and measures which cannot even be accomplished within the period of time being planned, such as, for example, improvement of the cosine ($\cos\phi$), reduction of losses on the network and others like these which require study and occasionally new investments in order to be accomplished. Such steps are correct, but the important thing is to plan the ways and the sources of these savings along with the production plan and the plan for intensifying the technical and scientific revolution. In this way, they are accomplished and implemented. For example, it is known that improvement of the cosine line is accomplished by installing motors and transformers consistent with the load so they do not operate under a no-load condition, as well as by installing batteries and static condensers and similar things which lead to improvements in the energy balance. This is also how the problem of losses on the network stands. For example, the communal network in Shkoder for years has had losses higher than the technical standard. There are times when these losses reach 25 percent, i.e., one-fourth of the energy provided by the energy system is lost along the way, without reaching the consumer. The reasons for such high losses are known: the 6 kilowatt lines should not extend more than 6 to 10 kilometers, while in practice they stretch over distances of 60 to 100 kilometers. The 0.4 kilowatt network is also overextended. All consumers in Shkoder District are served by a single substation! The 35 kilowatt network of water pumping plants is not being utilized with the speed or efficiency required for communal purposes. With such a condition in the network and neglect for its improvement, it is clear that energy losses are high. Serious demands could not even be placed on its quality. This is evident in the frequent fluctuations in tension, especially in certain outlying city districts and in villages.

These things cannot be regulated simply by the communal electric sector of a district. There are ways to conserve if we work not in campaigns but with science and accounting, mobilizing for this purpose both the DPEK [General Directorate of Communal Economy] and the DPEC [General Directorate for Electric Power Plants]. Understandably, this means investments above all, but investments of great benefit which provide savings of electric energy. In this field, besides studies for new hydroelectric and TEC [thermoelectric power plant] construction, studies which have to do with the administration and beneficial use of every kilowatt of energy should take precedence. First of all, a stop must be put to the huge losses in the network which the communal enterprises administer. Almost half the energy produced and which the electric system carries to the various consumers passes through this network.

It has been said on other occasions that the measurement of electric energy suffers from the lack of meters. This is most pronounced in the village networks and in special feeders which come from city zone stations. The basic criteria for the installation of meters, especially in the communal networks, is not only to measure how many kilowatts one consumer or another has spent in order to calculate the payment, but also to be in a position to know at all times how the flow of electric energy is distributed in the "arteries" of the district, where our greatest consumption is and, most importantly, to be in a position to create a balance between energy consumed at the end of the line and the energy supplied at the beginning of every line. From such a balance we can calculate the magnitude of losses on the network and the misuse of electric energy. Not knowing how to calculate, on the one hand, what the losses should be on one line or another under various loads and, on the other hand, due to the inability to make precise balances, often the abuses in electric energy cause the losses to be blamed on the network, or the network losses to be blamed unjustly on the consumers, since they themselves are not in a position to know the exact amount of energy they receive and consume.

The most optimum regimen of the energy system, i.e., when the losses are the smallest for an identical unit of energy produced both day and night, both summer and winter, is practically impossible to accomplish and this shows up in what is always distinguished as a "peak," an increase during 1000 to 1100 hours and 1900 to 2100 hours daily, creating the so-called "morning peak" and "evening peak." On Wednesdays the load is heavier and on Sundays the load is lighter than the other days of the week. These "peaks" usually last one to two hours. When resources are inadequate to meet them, the need arises to introduce another reserve resource, for instance a thermoelectrical power plant, into fulltime operation. However, this is accompanied by new costs, therefore constant efforts must be made to diminish the peak load. Diminishing the "peak" in energy means to conserve.

We have many rather powerful consumers who work on only a single shift throughout the year. There are many others who work even less, such as the steel smelting furnace at the "Drini" plant in Shkoder or the rolling unit at the electric wire plant, etc. Had the necessary measures been taken by such consumers and others like them, they could figure on putting the aggregates which consume energy into operation not when they deem it reasonable but when the energy system has more energy reserves available. There are also many occasions when repairs are made to machinery, i.e., they are taken down in the period when energy is plentiful and inexpensive, as in December, and they are counted on and remain on the job when energy is scarce and expensive. It would therefore be good to plan for repairs to be made as a rule during the months of June, July and August.

These and other problems which are related to improving the quality of energy and its conservation today, when our electric system produces and distributes millions of kilowatt hours, should be examined deeply and carefully because this is where great savings are discovered, without any or with only few investments.

5658

CSO: 2100

DEVELOPMENT OF TEXTILE INDUSTRY DISCUSSED

Tirana BASHKIMI in Albanian 2 Nov 79 p 2

[Article by Hantije Cela, deputy minister of light industry and the food industry: "Broad Development of the Textile Industry"]

[Text] The textile industry in our country, which was born and developed during the years of popular authority, has become a powerful branch of our economy, which is fulfilling even better the public's growing demand for various types of textiles. It is also fulfilling all of the needs of other sectors of the economy with textiles.

The establishment of three large enterprises, such as the "Stalin" Textile Mill in Tirana, the Knitting Mill in Korce and the Berat mill, as well as several textile factories, such as the cloth factory in Shkoder, the knitting mills in Pogradec, Shkoder and Permet, has created all of the conditions for the textile industry to produce a very broad range of fine quality textiles and knitwear, children's wear, technical textiles, sewing thread, etc. Tens of millions meters of textiles are being produced on this powerful industrial base, making per capita production in our country at one of the highest levels in the Balkans and in Europe. The high quality of textile products and the large production obtained have caused a great increase in exporting them to international markets.

The fundamental task which the Seventh Party Congress placed before workers in light industry for the radical improvement of quality has become the central point of their work. This has led to the noticeable growth of production quality indices. The majority of textiles is produced in highest quality, with beautiful and bright colors, with designs and stitching which correspond to the tastes of our people and based on our national traditions.

These visible quality changes have been achieved on the basis of such profound technological changes as the establishment of optimal technological parameters, the improvement of work operations, fundamental changes in the technology of dyeing, especially at the Berat mill, the introduction of special apparatuses, fire retardants, Sanforizing, etc.

The mechanical base of the textile industry in particular has been reinforced. Besides the large, previously established shops, a plant which manufactures spare parts and textile machinery has now gone into operation in Berat. This powerful base has managed to produce in high quality all the spare parts not only for the textile industry but also for the clothing industry. The workers in the mechanical branch of the "Stalin" mill have managed to manufacture such very difficult and highly complex consumption materials as garnishments, carding combs, etc. All of these things have freed the textile industry from the need to import the greater part of consumer materials and have greatly increased its independent operation. Over 95 percent of our spare parts needs are being met through our own efforts.

Another important aspect is the use of synthetic fibers in combination with domestic cotton and wool. The expansion of the use of new raw materials has brought about radical changes in the range of assortments and in the growth of textile utilization values. The introduction of synthetic fibers in production through the adaptation of existing machinery and the change in technological processes constitutes an important quality step and is a complex technological problem, but one which clears the way for the further expansion of work in this area.

The textile mills represent enterprises with a high organizational level of labor and production not only within light industry and the food industry but on an economy-wide scale. This has resulted in mechanized work predominating there, work standardization is quite high and economic and financial indices are at a satisfactory level.

All of these things have enabled the technical and scientific revolution to develop at a rapid pace in all directions. There is visible growth in scientific study which appears both in the expansion of scientific topics, in viewpoints advanced and in the high level of production.

Transition from the phase of planning and manufacturing machinery components and parts to planning and manufacturing major technical machinery has been achieved. Production of the first automatic looms, dyeing equipment, drying units, sewing machines, automatic garnishment and comb makers, etc., are examples which indicate not only the achievements but also the great capabilities which exist in the machinery manufacturing field.

The tasks which the Seventh Party Congress assigned for the exploitation of production capabilities were understood correctly by the workers in the textile industry. In this regard, a fine effort has been made at the Berat mill where greater production is being achieved in many departments on two shifts than had been done on three shifts. This highly significant result made it possible to obtain a considerable increase in production in the next five-year period with the existing machinery pool.

A project to expand the textile industry during the next five-year period by increasing machine productivity and making better use of existing space was researched and concluded. Much of the equipment will be manufactured locally at factories which are being built or expanded, synthetic fibers will be used widely and many new assortments will be produced.

Great tasks are facing the workers of the textile industry in the field of production and the technical and scientific revolution. Continued improvement of production technology is especially important.

Studies and experiments must precede the utilization of chemical fibers which will be produced locally in view of the development which petrochemicals will undergo in our country.

The production of new machinery and items is aimed not only at expansion of the textile industry but also at implementing reconstruction in limited production elements and in sectors where low productivity exists, making better use of available data on the most modern domestic and imported machinery.

Scientific work toward the partial automation of certain production machinery and production processes is going to be better organized, with the main goal of automatizing key elements of technological processes where product quality is determined, as in the loose aggregates, the dyeing processes, etc.

The powerful mechanical base which we have has not yet been organized at the level where it can undertake the manufacture of major technological machinery. All conditions exist for organizing a more rational division of human and material resources to benefit the manufacture of articles, machinery, complex aggregate mechanisms, etc.

All of this demands that a better effort be made to find ways and means to continuously improve the qualification of workers, middle-level and senior specialists and managers. Regardless of the fact that we have a good situation in attendance at schools and training courses, with the new demands being placed on production under the actual conditions of the harsh imperialist and revisionist encirclement, efforts are being made to improve all qualifying educational work. Special significance is being given to raising the ideological, political, educational, cultural and professional levels, aiming at the mass application of all workers' experimental, observational and innovational work, expansion of their participation in the technical and scientific revolution, in order to achieve greater successes in the effort to implement tasks which the party and Comrade Enver have assigned and to proceed proudly and successfully to the great jubilee of the 35th anniversary of the liberation of the fatherland.

COMMENTS ON INTERPRETATION OF PRIVATE FARMS LAW

Sofia STURSHEL in Bulgarian 2 Nov 79 p 1

[Article by Stefan Bobchev: "In the Jungle of Common Law"]

[Text] It is known that many people raising animals in private farms try to outsmart the state. It is quite difficult, however, to raise, for example, 67 cows, 100 sheep and 120 pigs just like that, without doing something illegal... And what happens! Simple, if you are an agricultural chief, you abuse your official position... While the regular cooperative members, who cannot abuse any position, shall we say... resort to theft now and then! Be it hay or concentrated fodder, be it fruits or corn kernels...

Abuses and theft are, of course, bad things. Therefore, we have laws against them, or, to say it scientifically, we have written law.

There is a written law but there is also a common law. And sometimes local leaders resort to the common law, i.e., when they want to publicize their own interpretation of one or another economic problem. This is confirmed by the Razgrad Okrug People's Council ordinance of 4 September of this year.

The obshtina people's councils said announcements to all private farms that raise animals on the basis of the 61st and 76th ministerial decrees. These announcements, with crude administrative language, inform the private farmer that by the end of October he must "liquidate by selling to the public sector all animals exceeding 5 pigs, 3 sows, 10 sheep, 1 cow or water buffalo cow," and so on. The reason is the mass theft mentioned above.

Apparently to limit theft, letters are sent also to owners of horses, which "are subject to liquidation by sale to the agroindustrial complex or, in case of refusal, to other okrugs." Subject to liquidation by sale are the horses, of course, not the owners. It seems that in other okrugs one can steal with a horse-drawn wagon. In Razgrad this can happen only with a donkey, mule or a hinny. As to cars and trucks, the question is pending.

The respective decrees of the Council of Ministers were interpreted on doubt the wrong way by about 20 "Nepmen" in Razgrad Okrug as well.

Farms blossomed in some villages and were better organized than the cooperative ones. Let us say as concerns fodder.

And, of course, there is plenty of stealing. This can be confirmed by every single field watchman.

Among others, the villages of the okrug have 400 armed field watchmen. They are not armed to the teeth but still quite adequately. And there are about that many mayors and other administrative personnel with the power of generating respect. This vanguard battalion has on its side the law on preservation of agricultural property. It stipulates among other things that "the okrug, people's councils organize, manage and supervise the preservation of agricultural property."

It does not mention, however, whether for the purpose they can limit the force of the ministerial decrees.

But, no matter what we say, the ordinance of the Razgrad People's Council is already a fact. Let us try to imagine its consequences. Who is going to buy, for example, the animals exceeding the set number! The leaders of the okrug cooperative union are standing firm that they do not have the basis nor the superstructure for such a farm master coup. Is there not any danger that for this reason the word "liquidation" might be understood literally?

And what will happen with the long-term agreements of the farmers raising greater numbers of animals? Some of them have obtained loans relying on the ministerial decrees...

How events will develop from now on, a newspaper is unfortunately in no position to know.

Author's Note. Years ago, because of gasoline thefts, every living creature that drove a car had to obtain gasoline coupon booklets even when not needing any gasoline. It came out, however, that this system was unfair and was later abolished.

But, since not everybody can learn his lesson by reading it only once, one tries again the old ways wherever possible. Moreover, this way of fighting against evil is very convenient for some, i.e., why should one go and patrol the fields when he can stay home and still draw the same salary!

On the other hand, we think that the okrug cooperative union must give the contracted fodder long before the cattle get hungry in order not to tempt the honest people as well.

ROLE OF METALS IN CSSR ECONOMY COMPARED WITH WEST

Prague PLANOVANE HOSPODARSTVI in Czech 10 Nov 79 pp 64-73

[Article by Engr Jaromir Lichnovsky, State Planning Commission: "Role of Metal Fund in Czechoslovak National Economy"]

[Text] Discussions have been going on both in foreign countries and the CSSR for a number of years on what should be the long-term trend in production and consumption of steel. The metal continues to occupy the most important place among the structural materials in construction of machinery and equipment. The forecasts by various international institutions confirm its dominant position for the period extending at least to the year 2000. Definite specific interdependencies have been established. In the case of steel for example the past development has revealed that with the per capita income of approximately \$300 (this stage is described as the beginning of industrialization) its consumption begins to increase significantly. On the other hand, with the per capita income of \$2,500 and developed metalworking industry, a stagnation or only a slight increase takes place.

Industrialization is carried out at a rapid pace throughout the world, particularly through engineering industry, and the metallurgical base is thus simultaneously enlarged which is true of the socialist countries in the first place.

World production of raw steel doubled during the 1960-1974 period. It became stagnant, however, by 1977.

	1973	1974	1975	1976	1977	1978	1979
USSR	131.5	136.0	141.3	145.0	147.0	151.5	581
United States	136.8	132.2	105.3	116.1	113.3	126.5	579
Japan	119.3	117.1	102.3	107.4	102.4	102.1	888
FRG	49.5	53.2	40.4	42.4	39.0	41.3	673
Italy	21.0	23.8	21.9	23.5	23.3	24.3	428
France	25.3	27.0	21.5	23.2	22.1	22.8	428
Great Britain	26.7	22.3	20.1	22.3	20.4	20.4	365
Poland	14.1	14.6	15.0	15.6	17.8	19.4	554
CSSR	13.2	13.9	14.3	14.7	15.1	15.3	1001
Canada	13.4	13.6	13.0	13.1	13.7	14.7	628
Romania	8.2	8.8	9.5	10.7	11.5	11.7	535
Belgium	15.5	16.2	11.6	12.1	11.3	12.6	1279
Brazil	7.2	7.5	8.3	9.2	11.2	12.1	103
Spain	10.8	11.6	11.2	11.1	11.1	11.3	307
World, Total	698.1	709.8	647.3	678.3	674.3	713.8	170

The figures reveal big differences in the distribution of world steel production, since 14 states with production exceeding 10 million tons account for 82 percent. The share of socialist countries increased from 30.4 percent in 1974 to 34.9 percent in 1978. While steel production preserved its rising trend in the CEMA states, it has stagnated due to the crisis phenomena in the capitalist countries already for a number of years. According to the preliminary data, world steel production again increased to 713.8 million tons in 1978, which represented a 6 percent increase over 1977, and reached thus the highest level in history.

It nevertheless appears that the optimistic forecasts by a number of experts on world steel production amounting to approximately to 900 million tons by 1980 will not come true. On the basis of the analysis of trends in individual states, one can anticipate that world steel production could on the average increase by 2-3 percent annually. The variant with a 3 percent annual increase (in million tons):

<u>1975</u>	<u>1980</u>	<u>1985</u>	<u>1990</u>	<u>2000</u>
647	750	870	1010	1300

It is anticipated that the developing countries will install new capacities amounting to 120 million tons (that is more than the total capacity of EEC) during the 1978-1985 period. Two-thirds of these capacities will be installed in the following six countries: Brazil, Iran, Venezuela, Argentina, India and South Korea.

Due to the increasing cost of new steel technologies and expensive measures for environmental protection enacted in their countries (amounting to as much as 20 percent of investments in metallurgy), the Western states with a developed steel industry began to consider shifting primary production

to the countries with rich deposits of iron ore and ample energy resources. This general tendency is hindered, however, by lack of financial funds and fluctuations on the world steel markets. Steel production will be carried out on a larger scale in the future in the developing countries whose share in world production will increase.

The comparisons of steel consumption with further industrialization are not proper for the long-term estimates of steel production because the correlation varies in individual countries. This is necessarily due to the unequal position of engineering production as the principal consumer of metals, structure of engineering industry, share in exports of machinery and so on.

Nor can we arrive at more positive results by comparing steel production and consumption per capita in developed states in 1977 (in kg):

	Sweden	CSSR	USA	FRG	USSR	Japan	Belgium
Production	482	1,005	522	637	568	901	1,147
Consumption	743	741	618	607	556	512	421

Note: Data for Sweden, FRG, USSR and Belgium are for 1976.

The same applies to the comparison of steel consumption per capita with gross domestic products listed in the international statistics. The finding that gross product per capita is larger in Denmark or New Zealand than in the CSSR while steel consumption is half of ours, cannot be used for comparison because of different natural and other conditions. We can, however, compare the countries with an industrial structure similar to that of the CSSR. From the national economic standpoint, the inter-relationship between gross domestic product (HDP) and steel consumption is interesting (in comparable prices of 1970):

	<u>USA</u>	<u>Belgium</u>	<u>Sweden</u>	<u>FRG</u>	<u>Japan</u>
HDP in billions of \$	1221.5	32.7	37.5	216.0	286.8
Per capita HDP in \$	5934	3337	4573	3512	2518
Steel consumption in million tons	134	4.13	6.1	37.3	58.3
Steel in tons/million of \$ of HDP	110	126	163	173	203
Population in million	216.8	9.8	8.2	61.5	113.9

Rough calculations reveal that the CSSR is still (by approximately 40 percent) ahead of Japan in steel consumption per unit of HDP. More interesting, however, is the fact that with the approximately 20 percent higher consumption per capita in the CSSR gross domestic product per capita is approximately 30 percent higher in the FRG. Such a finding merits attention and requires discovering of causes of this difference which might show the ways

of more rapid development of the national economy with a smaller steel consumption. The United States has almost the same steel consumption per capita as the FRG, but its gross domestic product per capita is 60 percent higher than in the FRG.

Steel production per capita was about 400 kg in the United States already approximately 50 years ago (the corresponding figure for Czechoslovakia was approximately 100 kg). The relatively larger steel production in the United States for many decades has produced also a relatively larger metal fund stock and thus created, among other things, also conditions for bigger industrial production per capita in the United States in comparison with other countries. It is obvious that annual steel production or consumption is not an appropriate indicator of what its level should be.

Production of the metal alone does not adequately indicate the probable trend in its needs because it does not reflect the total quantity of the metal active in the national economies. A more convenient indicator is the metal fund of the country by which we mean the quantity of the metal contained in machinery, buildings, means of transportation, intermediate and finished metal products. The following table lists tentative estimates of the world metal reserves:

	<u>1960</u>	<u>1965</u>	<u>1970</u>	<u>1975</u>	<u>1976</u>	<u>1977</u>
Metal fund in million tons	3,000	3,700	4,788	6,061	6,312	6,552
Population in million	3,000	3,280	3,620	4,019	4,132	4,250
Metal reserves in kg per capita	1,000	1,130	1,320	1,510	1,530	1,540

A large volume of metal reserves accumulated in the developed industrial states over the years which is primarily reflected in the level of their economic potential. The circulation of metals is governed by certain laws. Ferrous (but also nonferrous) metals occupy a special position among other material precisely because after completing its function they change into the full-value iron ore raw material for production of steel and cast iron. Apart from savings in iron ores, alloying additions, refractories and so on, more than half of energy is saved (for production of pig iron) necessary for production of one ton of ferrous metals. Attention is focused on recycling already because as much metal was extracted during the last 20-25 years as in the entire history of mankind until then.

The Soviet Union has ranked first in the world in terms of absolute production of raw steel already for a number of years. This is reflected also in the increase in the metal reserves as is evident from the following data (million tons):

	<u>1960</u>	<u>1970</u>	<u>1975</u>	<u>1980</u>
USSR metal reserves	418.7	856.9	1,150	1,500
Metal reserves in kg per capita	1,940	3,520	4,520	5,500

Source: L. Zusman "Metal Fund of USSR National Economy", VOPROSY EKONOMIKY, Vol 1976, No 5

The USSR share in the world metal reserves was approximately 20 percent in 1975 and amounts to 55 percent of the metal reserves of the United States, while showing a constant tendency toward a gradual reduction of this difference. The dynamic development of USSR metal reserves is reflected also in the increasing potential of all sectors of the Soviet economy and increasing share in world industrial production. The Soviet Union had the following structure of the metal product inventory at the beginning of 1972:

	<u>Million tons</u>	<u>Percentage</u>
Industry	327.0	35.8
Other production sectors	267.1	29.2
Nonproduction sectors	106.1	11.6
In housing	17.8	2.0
Metal in floating assets	104.0	11.4
Not specified	91.3	10.0
Total	913.3	100.0

In the USSR the role of the metal reserves are emphasized in determining the proportions in the development of ferrous metallurgy, in calculating depreciated metal scrap and the resulting needs of pig iron, structure of the metal reserves and control over the demands of individual sectors of the national economy for ferrous metals.

The following volumes and structure are anticipated for the metal product inventory of the United States (in million tons):

	<u>1974</u>	<u>1982</u>
Metal products inventory including	2,086	2,352
metal in use	1,347	1,521
Metal reserves in the form of		
depreciated ferrous scrap	739	837
Metal reserves in kg per capita	9,840	10,390
Metal products in use (in kg) per capita	8,360	6,700

Source: IRON AND STEEL ENGINEER, Vol 1977 No 2

Metals in the form of depreciated scrap is the basic reserve. It consists of obsolete, discarded products such as machinery, equipment, transportation vehicles and other metal items. Depreciated scrap makes up approximately 42 percent of the entire ferrous scrap in the United States.

Industrial (processed) scrap originates in production and processing of products made of ferrous metals, and accounts for approximately 23 percent of total scrap. Production scrap proper represents approximately 35 percent of annual steel and cast iron scrap and is fully processed by the metallurgical plants in the place of origin. More than 52 million tons of ferrous scrap were processed in 1974, while the capacity of processing plants exceeded 98 million tons. It is estimated that metal scrap processing industry will reach the annual capacity of 130-140 million tons by 1980.

The United States consumed the following quantities of ferrous scrap in recent years (millions of tons):

	<u>1974</u>	<u>1975</u>	<u>1976</u>	<u>1977</u>
Total consumption	95.67	74.67	81.55	83.53
Including:				
Purchased scrap	46.56	33.33	37.55	38.18
Scrap generated by production	50.11	41.76	45.37	44.91
Share in consumption (VO)				
/expansion unknown; ?steel				
production?/ in %	52	56	56	54

Note: The difference is either drawing upon or replenishment of stock.

Little use is made of depreciated scrap which remains in reserve. In the United States, scrap iron makes up 43-46 percent of the charge in steel production, 95-98 percent of the charge in steel foundries and 83-89 percent in grey cast iron foundries.

According to the Bureau of Mines, U.S. Department of the Interior, long-term estimates have been made on the needs of ferrous metals, production of raw steel and pig iron in the United States up to the year 2000. These long-term estimates anticipate the following values (in million tons):

	<u>1976</u>	<u>1985</u>	<u>2000</u>
Raw steel production	116.1	146	184
Pig iron production	78.7	103	129
Ferrous metals needs*	106.8	134.2	170.5
Average annual increase in needs (%)		2.6	1.6

* Ferrous metals = metallurgical products made of steel and cast iron.

The U.S. conception anticipates also for the future a further increase in the supply of depreciation ferrous scrap from which raw steel could be made at least for another 10 years without the use of pig iron, but with a large amount of domestic production and processing scrap. As a result, the metal reserves would stagnate because the present method of metal investments includes in the metal reserves increase only new metal originating in production of pig iron from the natural oxides of iron ores.

*

It is obvious that the data on the dynamic metal reserves increases could be used for working out different variants of the long-term development of metallurgy and that, vice versa, the metal reserves can be used for checks on different variants of the development of ferrous metallurgy. For this reason, the CEMA Permanent Commission for Ferrous Metallurgy approved already in 1968 the uniform methodology for calculating the metal reserves which is based on the so-called method of metal investments. The calculation of the metal reserve increases takes into account only pig iron production from Fe oxides, that is from new raw materials only. On the other hand, the following items are subtracted:

- pig iron production from secondary raw materials;
- unrecoverable losses in metallurgical production and processing of metallurgical products from steel and cast iron;
- balance of exports and imports of metallurgical products including pig iron, steel, ferrous scrap and of engineering products;
- losses caused by corrosion and abrasive wear (0.0-1.0 percent of the metal fund);
- unfeasible and incomplete scrap collection.

This method has been employed also in the calculations of the CSSR metal fund whose increase reflects the dynamic development of our developed economy:

	<u>1955</u>	<u>1960</u>	<u>1965</u>	<u>1970</u>	<u>1975</u>
CSSR metal reserves in million tons	28.5	38.9	51.0	64.9	78.5
Metal reserves in kg per capita	2,160	2,850	3,590	4,510	5,300
Turnover of metal reserves	27	22.8	21.3	23.3	24.2
Steel consumption in million tons	3.5	6.4	7.2	9.0	10.7
Steel consumption in kg per capita	265	467	507	624	722
Population in millions	13.2	13.7	14.2	14.4	14.8

The relatively big volume of Czechoslovak metallurgical production is reflected also in its share in the total consumption of primary energy--approximately 22 percent, of which ferrous metallurgy accounts for approximately 18 percent. The most energy consuming production phase is pig iron production which accounts for approximately 50 percent of all energy used in the entire metallurgical cycle. Czechoslovak blast furnace production has attained, with the present metal content of the blast furnace charge and average size of blast furnaces, the world standard as is evident from the survey for 1977:

	<u>Japan</u>	<u>CSSR</u>	<u>USSR</u>	<u>Poland</u>
Metallurgical coke consumption in kg per ton of pig iron produced	427	513	518	599
Average volume of blast furnaces in cubic meters	2,425	1,206	1,282	965
Fe content in charge in %	63.5	51.6	54.6	51.0

The CSSR occupies the first place in the world in consumption of steel, primary energy and production of electric power per capita:

	<u>Steel consumption</u> <u>(in kg)</u>	<u>Consumption of</u> <u>standard fuel</u> <u>(in kg)</u>	<u>Production of</u> <u>electric power</u> <u>(in kWh)</u>
1975	722	6,220	4,005
1976	733	6,400	4,206
1977	741	6,550	4,411

While the consumption rate has been declining in regard to steel (from 1.52 percent to 0.95 percent) and also standard fuel (from 2.89 percent to 2.34 percent), production of electric power per capita has maintained an approximately 5 percent increase per year.

Despite all work on the long-term estimates, the future development of steel production in the CSSR will have to be very carefully planned in view of the unfavorable conditions for the development of ferrous metallurgy from the standpoint of the raw materials basis, geographical position of the CSSR, large investments required in the development of metallurgy, continued increase in the prices of raw materials and increasingly difficult conditions in securing fuels and energy.

The reduction of fuels and energy consumption is anticipated also by one of the possible variants of development of metal fund (KF) based on the estimates of production and consumption of ferrous metals in the CSSR:

	<u>1980</u>	<u>1985</u>	<u>1990</u>	<u>2000</u>
KF in mil.tons at the beginning of the year	98.0	119.4	141.6	183.7
KF in mil.tons at the end of the year	102.3	123.7	146.2	187.5
KF in kg per capita	6,650	7,860	9,110	11,130
KF turnover in the year	26.1	26.1	24.4	21.0
Steel needs in kg per capita	790	880	960	1,050
Total steel needs in mil.tons	12.2	13.8	15.4	17.6
Including steel for:				
KF replacement	5.3	6.5	7.9	11.4
KF increase	6.0	6.2	6.3	5.0
Net export of machinery	0.9	1.1	1.2	1.2
Raw steel production, total	16.1	16.6	17.1	19.3
Population in mil.	15.4	15.7	16.1	16.8

The steel production variant based on the domestic steel requirements and indispensable export of metallurgical products in terms of steel would make it possible not to increase the absolute volume of energy needed in ferrous metallurgy above the present level at least to the year 1990, if the figures are adhered to contained in the study "Selected Problems of Development of Ferrous Metallurgy up to Year 2000" which was prepared by TEVUH [Technical Economic Research Institute of Metallurgical Industry] Prague.

It would be expedient to speed up the metal reserve turnover in our country. A slow replacement sustains obsolete equipment and large quantities of metals which could be used for the manufacture of more efficient machines and equipment. It would reduce maintenance costs, increase the coefficient of shifts worked, reduce the number of machine operators and so on. Increased availability of depreciated scrap would reduce our foreign exchange needs because smaller iron production would not require imports of such large quantities of raw iron ore. Energy needs of the national economy would also be reduced.

By speeding up the metal reserve turnover from the planned 24.4 years to 21 years by 1990 for example we would eliminate the iron ore imports from the capitalist states of amounting to almost one million tons of Fe (that is approximately Kcs 800 million at the present prices). With the same scope of steel production, however, metal reserves will increase more slowly because a relatively smaller share of steel would be allocated for

the replacement of machinery and equipment. A more rapid modernization of the production base would have favorable effects such as increases in labor productivity and so on.

The estimate of the development of the metal reserves in the CSSR is based on the potential engineering production and construction industry which corresponds to a 4 percent average annual growth rate of national income during the 1980-2000 period. Probably domestic needs of ferrous metals have been calculated on the same basis:

	<u>1970</u>	<u>1975</u>	<u>1980</u>	<u>1985</u>	<u>1990</u>	<u>2000</u>
Needs mil.tons	7.04	8.96	10.28	11.72	13.0	15.43
Average annual growth rate		4.9	2.8	2.7	2.1	1.7
including						
engineering sector	4.69	5.89	6.80	7.78	8.01	9.81
av.annual growth rate		4.7	2.9	2.7	2.1	1.3
construction industry	1.32	1.76	2.09	2.47	2.79	3.52
av.annual growth rate		6.0	3.5	3.4	2.5	2.4
Other sectors	1.03	1.31	1.39	1.47	1.60	2.1

According to the long-term estimate, the development of ferrous metallurgy--the material base of Czechoslovak engineering industry--will also remain a key sector of the Czechoslovak national economy both in providing progressive technology and producing a surplus in the balance of payments.

In this context (despite justified reservations to such a comparison) it is not without interest to compare the trends in the increased needs of ferrous metals in the CSSR and the United States which has achieved the most effective utilization of ferrous metals per unit of gross domestic products in the world so far.

U.S. Needs of Steel and Cast Iron Metallurgical Products (in mil. tons)

	<u>1976</u>	<u>1985</u>	<u>2000</u>
Ferrous metals requirements	106.8	134.2	170.5
Average annual growth rate (%)		2.6	1.6
Import of ferrous metals	13.0		20.2
Production of ferrous metals	96.3		150.3
Steel production	116.1	146.0	184.0

Source: Bureau of Mines, U.S. Department of the Interior--Iron and Steel, Vol 1978, No 7

The U.S. estimate of ferrous metals and steel production is based on the presumption that 12 percent will be imported. On the basis of the analysis of economic efficiency of steel production and imports, the United States changed from the exporter into the importer of ferrous metals. The authors of the study on the long-term needs of ferrous metals are of the opinion that the import of large quantities of the metal from Japan and Europe to the United States will not be maintained on the present level because of the continuous increase in the price of raw materials, energy, labor, costs of environmental protection and so on, but will be rather reduced. On the other hand, the potential possibility of imports of metallurgical products from the developing countries will increase.

Data for the CSSR (in mil. tons)

	<u>1975</u>	<u>1985</u>	<u>2000</u>
Ferrous metals requirements	8.96	11.72	15.43
Average annual growth rate		2.7	1.9
Import of ferrous metals	0.29	0.08	0.14
Export of ferrous metals	3.07	2.28	1.47
Production of ferrous metals*	12.05	14.4	17.32
Raw steel production	14.32	16.6	19.3

* The difference between the resources (production + import) and needs (domestic needs + export) represents the losses arising in production.

It follows from this comparison that the Czechoslovak needs in this area are based on the realistic assumptions and correct orientation to the reduction of metals per unit of national income increase.

Consumption Structure of Metallurgical Products
Made of Steel and Cast Iron

	CSSR (1975)		United States (1976)	
	Mil. tons	%	Mil. tons	%
Total	8.96	100	106.8	100
Including:				
Engineering	5.89	65.7	75.2	70.4
Construction	1.76	19.6	27.5	25.8
Other sectors	1.31	14.6	4.1	3.8

In the total U.S. needs of ferrous metals for engineering industry, transportation of all types accounts for 46 percent, engineering proper for 28 percent, packaging and containerization for 10 percent, crude oil and gas industry for 8 percent and other sectors for 8 percent. The comparison demonstrates that developed industrial states with a developed engineering industry do not significantly differ from one another in the structure of consumption of ferrous metals in the national economy.

The saturation of the national economy with the metallurgical products made of steel and cast iron is a frequently discussed question in the developed industrial states. The opinions on this problem vary. Some Soviet experts for example are in favor of setting a limit of 8,000 kg of metal fund per capita. The term saturation in this respect (that is the amount of machinery and equipment, other products made of metal and so on) is somewhat relative and depends on many factors. Nevertheless, a break in the metal fund increase takes place, when a certain degree of saturation is reached. It is difficult, however, to accurately determine this moment. The comparison of metal reserves of the CSSR and United States hints at the problems involved.

According to the data in literature (IRON AND STEEL ENGINEER; IRON AND STEEL-IRON ORE--U.S. Bureau of Mines), the following trend in the U.S. metal fund is anticipated (in mil. tons):

	<u>1974</u>	<u>1982</u>	<u>1990</u>	<u>2000</u>
Metal reserves, total	2,086	2,358	2,800	3,480
including active KF	1,347	1,521	1,820	2,280
KF from depreciation scrap	739	837	980	1,200
Total KF in kg per capita	9,840	10,390	11,430	13,130
Active KF in kg per capita	6,360	6,700	7,350	8,600

Virtually 35 percent of the U.S. metal fund consists of depreciation scrap from discarded machinery, repairs and metal articles. It is obvious that a predominant part of raw steel production was used in the United States for reconstruction and modernization of machinery and consumer articles. This points to the ample availability of depreciation scrap and also to the short period of metal turnover in the metal fund. It means on the other hand that only part of depreciation scrap is used for steel production in the United States, while the remainder is assigned to reserve.

The national economic costs of collection and processing of ferrous scrap in the CSSR are much lower than the cost of pig iron production. Primarily for this reason, all studies on the development of Czechoslovak metallurgy consider in the first place processing of all ferrous scrap which will partly replace pig iron in the charge of steel plants and foundries and bring it to the technologically desirable level. As a result, raw steel production from ferrous scrap will save approximately 50 percent of energy needed in its production from pig iron of domestic origin. The national economy, however, will benefit also in many other respects.

During the 1980-81 period, the active metal reserves will bring the metal fund per capita in the CSSR to the same level as in the United States as is evident from the following comparison (KF in kg per capita):

	<u>1980</u>	<u>1982</u>	<u>1990</u>	<u>2000</u>
CSSR	6,650	7,170	9,110	11,130
United States		6,700	7,350	8,600

The United States has achieved the highest labor productivity in the world so far which testifies also to the much more effective composition and structure of the metal fund as compared with other countries. A comparison of data on the metal fund of the CSSR and the states with a similar structure of industrial production is difficult because with the exception of the USSR and United States they do not publish these data. This is true also of more comprehensive data on the anticipated long-term estimate of the development of ferrous metallurgy which are available for the United States only.

After analyzing the causes of the metal reserve increases in the CSSR, we can reach the conclusion that among the factors which affect it are the following ones:

--a low ratio of consumption of high-grade, heat-treated and high-carbon (? vysokopevnostni) steels which is reflected in the heavier weight of machinery and equipment (by 10-60 percent). A similar situation exists in the construction sector;

--the unfavorable structure of metallurgical production with a small ratio of flat products, seamless tubes and incomplete assortment of rolled material. An improvement of structure and quality, together with the increased use of progressive metallurgical products would reduce the annual requirements in the amount of 1-1.5 million tons of ferrous metals in the national economy;

--inadequate replacement of obsolete machinery which leaves a large number of machines idle during the first shift and results in constant decrease in the number of shifts worked, increased repair costs and large maintenance staff;

--increase in the average age of machinery in most sectors which increases its obsolescence and physical wear and results in low technical standard in many instances;

--insufficient use of economic tools (prices, material incentives for designers and so on) which fails to effect actual savings of metals in products and prolong their service life and reliability.

The 15th CPCZ Congress and a number of subsequent meetings of the CPCZ Central Committee dealt with the problems of a more effective development of the Czechoslovak national economy in connection with the implementation of scientific-technological progress, savings of energy, fuels, metals and other materials, improvement of quality, structure of the national

economy, more effective management and the like. All these factors are directly as well as indirectly reflected in the metal reserves of the CSSR.

In the future development of the Czechoslovak national economy, it would be desirable to achieve the metal reserves of 9,000 kg per capita by 1990 and to anticipate its stagnation or even a slight decline for a more effective development of the Czechoslovak economy. This would be positively reflected in the virtually unchanged energy consumption in metallurgy during the 1980-2000 period. Even while fully meeting the domestic needs of ferrous metals and producing the necessary surplus in the export of metallurgical products, this is by no means an unrealistic task. It would favorably affect not only the fuel-energy situation and environment, but also the supply of foreign exchange necessary for import of iron ore raw materials and energy, the number of workers in ferrous metallurgy and promote quality instead of quantity. It will be possible to transfer investment funds from the blast furnace area to collection and processing of steel and cast iron scrap, and to solve ahead of time the questions related to the structure of Czechoslovak steel plants technologies. We should set ourselves the goal to produce 18-19 million tons of raw steel in the CSSR by 2000 taking into account that production of one ton of rolled material requires 1.6 ton of standard fuel at the present time. Energy requirements of ferrous metallurgy must be considered also in connection with the export of ferrous metals. Steel production should be primarily oriented to the satisfaction of domestic needs.

It has become more clear than ever before that the problems of the national economy must be attacked comprehensively and systematically. Together with the reserves invested in the restructuring of the technical base, the long-term development and structure of the metal fund must aim at increasing the economic potential of the CSSR, more intensive development of the national economy and increase in overall efficiency.

The restructuring of the metal reserves of the CSSR must be primarily motivated by the long-term orientation of our engineering industry to progressive machinery with small weight (in kg) per unit of output and high technical standard. Considerable values have accumulated in the metal reserves of the CSSR--the value of machinery alone was Kcs 560 billion in 1978. For this reason, the volume and structure of the metal reserves are one of the most serious long-term problems of the national economy.

10501
CSO: 2400

CZECHOSLOVAKIA

BRIEFS

HEALTH INSURANCE BUDGET--On 12 December in Prague the eighth session of the administrative commission of the central health insurance administration discussed the CSSR health insurance budget for 1980. The budget envisages expenditures of Kcs5.719 billion, which is Kcs205.5 million more than this year. [Prague MLADA FRONTA in Czech 13 Dec 79 p 2 AU]

CSSR, SWEDEN SIGN PROTOCOL--A protocol on the trade agreement between Sweden and Czechoslovakia for next year has been signed in Stockholm. During the negotiations both sides stressed their interest in a further expansion of mutual economic relations. [Text] [AU191302 Prague RUDE PRAVO in Czech 15 Dec 79 p 7 AU]

AGRICULTURAL DELEGATION FROM MOZAMBIQUE--On 16 December a 3-member delegation of cooperatives from the People's Republic of Mozambique arrived in Prague at the invitation of the Central Committee of the CSSR Union of Cooperative Farmers. The delegation is led by Abdul Amir Juma, head of the department of cooperatives at the Ministry of Agriculture of the People's Republic of Mozambique. During its stay in the CSSR the delegation will familiarize itself with the system of cooperatives in the CSSR. [Bratislava PRAVDA in Slovak 19 Dec 79 p 2 AU]

SLOVAK SUGAR BEETS--Slovak farmers grew 2 million tons of sugar beets in 1979. Slovak sugar refineries are processing almost 130,000 tons more than in 1978. They are producing more sugar in spite of the fact that for the campaign as a whole the sugar content was 0.7 percent lower than in 1978. At the beginning of the campaign in September and October the weather was unusually warm and the sugar beets in storage were greatly jeopardized. In addition, there were too many weeds and vines. Though harvest losses were not kept down to the designated level of 12 percent, they were 5 percent lower than in last year's harvest; on the average as a whole losses amounted to 18 percent. [Excerpts] [Bratislava ROLNICKE NOVINY in Slovak 3 Jan 80 pp 1, 2]

AUTOMATED TELEPHONE NETWORK--As of 15 December the CSSR has expanded its automated telephone network to include Portugal, Greece and Spain; the automation works in both directions. [Prague RUDE PRAVO in Czech 15 Dec 79 p 2 AU]

BRIEFS

NEW FERTILIZER SYSTEM--The abbreviation DC 79 is the designation for a new system of fertilization which was introduced in 1979 on a large scale in GDR agriculture. It is a further development of the methods in use since 1969 and 1973 and takes into account new scientific findings and practical experiences in plant nutrition. DS 79 makes it possible to ascertain precisely and to apply the optimum quantities of mineral fertilizer and other agricultural chemicals necessary for good plant growth and, thereby, for high, stable yields. The advantage of DS 79 also lies in its more economical use of materials. At the same time, the fertilization recommendations of DS 79 take into account from the outset all quantities of nutrients necessary for plant growth, including those so-called trace elements which are administered on a smaller scale but are important nevertheless. This pertains, above all, to the organic substances for soil improvement. [Excerpt] [East Berlin NEUES DEUTSCHLAND in German 28 Dec 79 p 3]

CSO: 2300

EFFECTIVENESS OF MACHINE INDUSTRY INVESTIGATED

Budapest FIGYELO in Hungarian 21 Nov 79 p 3

[Article by Laszlo Redei: "Improving the Efficiency of Goals"]

[Text] Early in 1979, the Council of Ministers ordered the ministers to point out on an experimental basis those organizations that operate at a loss but are modifying and modernizing their production structures in accord with technical and economic criteria and efficacy calculations. This article sums up the findings in the machine industry.

The analysis of enterprise efficiency in the machine industry was done by two methods: Enterprise self-evaluation and the ministry's evaluation. As a first step the ministry ordered 11 units of the machine industry enterprises to analyze their operations in one month--i.e., to determine the enterprise and factor efficiency, production structure and export activity in the light of technical and economic criteria and efficiency calculations. The goal of the analysis was to tell which sections, product groups, and relations were economical or uneconomical. The second step in the self-evaluation is to seek the causes of inefficiency. The enterprises had to reveal those factors, circumstances, and conditions that result in slight contribution to the net income. They also had to indicate whether the causes of unprofitability were temporary or lasting.

Finally, they had to define the actions that have to be taken to end the unprofitability. The companies had to tell what they had done so far to improve efficiency and their actions planned for the future.

In the meantime, the main departments of the ministry evaluated the 11 enterprises on the basis of existing data and information. In the course of this they measured enterprise efficiency, determined their 1978 production structure in accord with the development categories and examined their export profitability. Enterprise self-evaluation was compared with the ministry's evaluation and this formed the ministry's view. The ministry rated not just the examined enterprises but all enterprises under its direction through this method.

There Is a Large Spread

Of the many indexes useful for the determination of economic efficacy, they selected the index of net income per net value of resources. The reason for this is that while the most important index of efficiency on the enterprise level is profit, in practice it does not fulfill its theoretical role. This is connected partly to the shortcomings of the current price and regulation system and partly to the fact that it does not include a significant part of the net income resulting from the production process.

Net income was related to the present value of engaged assets (average net value of fixed assets + average value of inventories). The view was that it is worth investing and developing only if the resources used produce a profit.

This index has faults, too, which distort the result and the comparison. E.g., this index makes it appear that activities that require relatively less resources are more effective and hence even the annual depreciation produces an increase in efficacy.

The 1978 data show that the machine industry's efficacy generally exceeds that of industry in general. The position of the machine industry is favorable among the branches of industry.

Table 1

The Efficacy Indices of Industry and Machine Industry (1978)

Index	Industry (%)	Machine Industry (%)
Profit in proportion to sales receipts	7.6	12.2
Profit in relation to resources	10.4	16.8
Result/net value of resources	13.4	20.2
Results corrected by supports and production tax/net value of resources	10.7	22.0
Net income/net value of resources	21.0	34.2

In budgets, the ratio of supports to profits is about one-third of the average for industry. The efficacy of the socialist exports of the machine industry is more than 10 percent above industry's average (based on the price level index); the efficacy of non-socialist exports is somewhat worse than the average of industry in general. The efficacy of the machine industry enterprises has a wide spread. The results of the branch would greatly improve if the number of enterprises that use the resources efficiently increased and low-efficacy activities decreased. Therefore, inefficient enterprises have to be dealt with extensively.

Table 2

Machine Industry Enterprises Divided by Efficiency Categories

	Enterprise in % of all enterprises
Enterprises of high efficiency (more than 50 percent above the average)	10-12
Enterprises of favorable efficiency (more than 20 percent above average)	28-30
Enterprises of average efficiency	18-20
Enterprises with unfavorable efficiency (at least 15 percent below average)	26-27
Low-efficiency enterprises (reach less than 50 percent of the average)	14-15

Some of the enterprises in the machine industry have low efficiency. These enterprises account for nearly 13 percent of the branch's sales receipts more than 11 percent of its socialist and 33 percent of its capitalist exports, have over 17 percent of the fixed assets, employ 17 percent of the branch's manpower, and bring in nearly 10 percent of the profits.

Causes and Consequences

The rubel-export profitability of the low efficacy companies is satisfactory; it exceeded the machine industry's average by about 10 percent. The capitalist export's profitability was unfavorable in 1977 but improved a little in 1978.

The reasons for the low efficiency vary according to enterprise. The main factors at the enterprises include a low technological level, wide product mix, old machinery--there are very few numerically controlled machines which represent high technical levels--the proportion of machines which were depreciated to 0 value but still produce is high, and there is still a lot of milling technology. Technological discipline is low. The use of existing equipment is unfavorable and there are not enough production shifts. The large downtime is due to low-quality production organization. The goal of investment in many places is still the creation of a new work place and not the raising of the level of technology. Due to the unsatisfactory level of production organization, volume and series size often do not reach proportions sufficient to make production profitable. It has even occurred that after an investment project was finished, only 30-40 percent of the capacity thus created was used.

Causes related to sales are as follows:

The efficacy of production is significantly influenced by the marketing work. Experience shows that in the recent past the companies emphasized

the quantity of exports and neglected the improvement of the level of the marketing.

Concerning enterprise organization and the quality of leadership, we find that in the majority of the companies the increase in quantity was not followed by the necessary improvement of organization. In many cases unwarranted centralization, a high degree of internal verticalization, and a long chain of direction brakes and obstructs effective production. Work and factory organization has not become, in the majority of the cases, an organic part of management and thus does not contribute to the exploration of internal reserves. The intra-enterprise and interfactory management and incentive system is obsolete in most instances and does not measure up to present economic criteria. In many cases there is also trouble with the general view of the leadership because in certain enterprises the province-based divisions are regarded as "colonies" whose task is to serve the company. In the end, all these influence--unfavorably--the efficacy of the enterprises.

The low efficacy is also due, in some enterprises, to the low level of leadership and lack of readiness to lead. The leaders of these companies cannot post proper goals and thus cannot mobilize their workers. Some leaders who are close to the retirement age concentrate merely on surviving their remaining working years. There are other leader types as well: These people have swelled "their" enterprises for prestige, without creating external and internal conditions.

The difficulties that are connected with enterprise management also have a role in the low efficacy: E.g., improper budget management. Budget increases were due to high maintenance cost, losses due to rejects, unprofitable cooperation contracts that were made to increase volume and technical and economic moves that were not always properly prepared. Excessive stockpiling also adds to cost. In some companies, the interest paid on working assets amounts to 20-25 percent of actual profits. In a significant portion of the companies, incorrect labor management and incorrect use of available manpower also deduct from efficiency and productivity.

Factors Independent of the Companies

Company-independent factors also contribute to the low efficiency. The most important of these are:

--The backwardness of the back-up industry [infrastructure]; due to the lack of progressive small- and medium-sized companies, almost every company that produces end products has problems with continuity of production.

--The price of certain end products, especially durable consumer goods, that was set by the government has been unchanged for years. At the same time, the parts belong to the "free" price category and, consequently due

to the ripple effect of price increases, the price of the end product does not cover the cost anymore. Production becomes unprofitable. This influences the company's profits unfavorably.

--Shipments of goods contracted for several years earlier also cause problems. Since the technical content has not changed, the great increases in raw material prices can't always be passed on. This makes products, that were perceived as profitable at the time the contract was signed, unprofitable by the time of the shipment.

--In several companies, the drawn-out nature and cost overrun of the investment projects causes low efficiency. The burdens on assets are in the budget--in part or fully--but the production that would produce the profit does not yet exist (or it exists to a lesser extent than planned).

--The specified order is given by the buyer often a mere 1-3 months before the targeted production year. However, the producer must order the raw materials (that have a long production run-through) 18 months prior to production. In this instance, the risk in the form of frozen stocks, burdens the producer only.

Questions To Be Clarified

The improvement of efficacy is mostly the companies' task. Therefore the surveyed companies made short- and long-term plans to end low efficiency. The action programs of the companies are centered around the following themes: Production structure, production, marketing, company organization, and management.

Within these, the companies deal mostly with products to be phased out, work and plant organization, updating of technology, price work improvement, development of the internal accounting system, marketing modernization, and cost and material supply management rectifications.

The plans have many useful features (e.g., merging of production sites, export contracting, profit threshold determination, reduction of management employees) but it must be said that the majority of the companies' plans do not measure up, in form or content, to what is expected of them.

The main shortcomings can be summed up as follows:

--They did not separate the short-range (1979-80) and long-range (Sixth Five-Year Plan period) goals and moves;

--They did not quantify the effect of the planned moves and thus one cannot see when the enterprise will stop being of low efficacy;

--The enterprises have not modified their production structures with sufficient care and several do not even use a set of criteria;

--The process of phasing out the unprofitable products is slow.

To end the mistakes listed above, the enterprises' action plans must be modified and supplemented.

It is necessary to clarify certain questions and take decisive measures for progress.

For example:

--The phasing out of unprofitable products must be speeded up. The resources and manpower thus freed must be devoted to the increase of profitable production;

--A decision has to be made whether the phasing out of a product is to be based on the enterprise's or the national calculations of profitability;

--To improve the level of leadership in certain cases necessary personnel changes must be made. So far, in the past 7-8 months three general managers and 10 special managers were fired among these companies;

--The reward system of the managers of the low efficiency companies must be modified and made stricter;

--Control of the execution of the action plans must be made systematic. The examination of the causes of low efficiency is to be made continuous.

By determining the correct goals, selecting resources well and through consistent execution of the task we can hope for a speedy and lasting improvement in the machine industry and, through it, industry in general.

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CSO: 2500

PROJECTION OF STANDARD OF LIVING IN 1981-1985 PERIOD

Belgrade PRIVREDNI PREGLED in Serbo-Croatian 4 Dec 79 p 4

[Article by L Cocaj]

[Text] It is expected that resources for the standard of living will experience a more rapid growth than personal consumption. 820,000 apartments will be built, the greatest number ever during a five-year plan period. The total of personal income will grow by an annual average of 5.5 percent.

In the coming 5 years the overall standard of living of Yugoslavs, according to estimates, may increase by about 30 percent, representing an average annual growth rate of 5.5 percent. The anticipated growth in the standard of living, although slower than the rate of overall economic growth, will be one of the fundamental conditions for the development of socio-economic relationships and the improvement of economic dynamics, and it will make possible solutions to basic problems of the standard of living structure of the populace.

The Most Capital for Apartment Construction

In all of this a very important determination was to establish an optimal ratio between the standard of living and capital accumulation. The implementation of this policy without a doubt will depend on the degree to which the working man can take control of the overall process of social reproduction and distribution of the social product. It will also, however, depend on the speed and effectiveness with which systematic solutions, agreements and contracts are completed for acquiring and distributing income, just as the distribution of personal income will depend on the results of the efforts of organizations of associated labor and of every individual. In this manner, greater interdependence would be established between the growth in the standard of living of the working man and the results of his work. Specifically, it is expected that the working people will increasingly decide upon the portion of income and the amount of personal income for personal consumption and the standard of living.

In the working materials of the Federal Institute for Social Planning relating to the improvement of the standard of living, living conditions, and the labor of the working people and the citizenry, it is expected that within the framework of the standard of living, resources for the standard of living will grow somewhat more quickly than personal consumption. It is foreseen that the real volume of personal consumption will grow by about 5 percent annually, for a total growth of about 28 percent, while the increase in the standard of living would be about 6 percent annually, or a total of 37 percent for the entire 5 years.

Within the framework of the total increase in actual investments in the standard of living, it is anticipated that investments in apartment construction will grow at the fastest pace (7.5 percent) in comparison to all other elements of the standard of living. Here the most dynamic growth in investments will come from personal resources of citizens, amounting to 7 percent, compared to the 7.9 percent of resources from the public sector.

It is planned that this investment dynamic will make it possible by 1985 to build about 820,000 apartments. That would be both the greatest number of apartments ever built in a single five-year plan period, and it would also be a special contribution to marked improvement and movement toward a solution of the housing problem and other general matters related to the living conditions and working circumstances of the working people.

Greater involvement of private resources for housing construction would assure, among other things, the activation of potential resources that have remained unutilized during the present five-year period. In this manner compensation would be found for the lag in housing construction in the private sector. It is certain that the anticipated increase in investments from the public sector, along with more economical and effective use and better organization of labor, will contribute to more rapid solution of the housing problem for those employed in the public sector, compared to the situation during this five-year period. The increased investments will certainly contribute as well to improvement in the standard of housing.

In this period it should be expected that economically sound rents will be introduced. There will, however, continue to be rent subsidies for certain population categories. Such a policy will contribute to the creation, in the coming period, of conditions for the more rapid resolution of the housing problem for workers with low incomes. The development of communal activities is expected to accompany progress in housing construction so that the present relationships between these two activities will be maintained.

Increased Personal Income

Total public investments in health, cultural and educational activities, will increase in actual terms by about 5 percent on an annual average, representing a total increase of about 27 percent over the 5 years. This would create stronger material foundations for the satisfaction of public needs.

To reach the planned volume of personal consumption (about 5 percent annually), it is planned that the total available resources of the population will achieve a real annual growth rate of 4.5-5.5 percent. That will mean a somewhat slower growth rate than during this five-year period. The greatest impact on the planned expansion of these resources will come from growth in total personal income of those employed in the public sector, which in real terms will grow by an average 5.5 percent annually.

In contrast to the previous and present five-year periods in which the greatest factor in the growth of total personal income came from growth in employment, in the coming intermediate plan period it will be necessary to assure much more effectiveness by increased productivity. That will be possible primarily through advances and conscientious application of improvements in the system of acquiring and distributing income in organizations of associated labor, and assuring stimulative conditions for acquiring and distributing personal income in accordance with work results.

Continuing increases in income of all sorts are foreseen in the areas of pensions, invalid, and health insurance for children and social care, in harmony with material possibilities and available resources. It is anticipated that these resources will grow by about 32 percent, or by 5-6 percent annually. In this period it would be assured that pensions would depend on the results of current and past work and the contribution of the worker in associated labor and society while he was employed. This requires the preparation of socio-economic criteria and measures for the objectivization of contributions of current and past work for the purposes of this insurance.

In the coming intermediate plan period it should be expected that the total resources of the population that come from the private sector will grow more slowly than those coming from the public sector. The structure will change within the framework of the total resources of the population in the private sector due to the slower growth of natural consumption (as the value of natural production will have an average actual growth of about 3 percent), and the decrease in its share of these resources. The increase in personal income in the private sector will, however, amount to 4-5 percent annually in real terms, which will make possible the expansion of the purchasing power of the rural population.

In this period as well consumer credits will provide significant additional purchasing power to the population; here an 8 percent increase is foreseen. A somewhat more flexible and selective credit policy is also anticipated. The income of the population residing abroad will continue to represent a significant supplemental purchasing power of the population.

Slower trends in personal consumption in relation to total resources will affect greater savings by the population, with a growth of 7-8 percent annually in real terms foreseen.

According to the projections of the planners, in the coming intermediate period the portion of expenditures for food will decrease in relative terms, although in absolute amounts these costs will continue to rise. Specifically, food will take 33.8 percent of total resources. A further increase is expected in the amounts spent for furniture and household equipment, amounting to 11.2 percent. Heating, lighting and maintenance of housing will require 7.5 percent and transportation and postal, telephone and telegraph services, 13.5 percent.

Total expenses for food should increase by about 16 percent (about 3 percent per year on the average). More will be spent for animal products, including meat, milk, milk products and eggs, while grain products will decline in the total. The planners expect that in 1985 Yugoslavs will consume 34 kilograms more of vegetables per capita than in 1980, along with 20 kilograms more of fruit, 35 more liters of milk, 37 more eggs and 9 additional kilograms of meat. Judging from all these factors it appears that in the coming five-year period, Yugoslavs will eat better and more qualitative food than presently.

Consumption of industrial, nonfood products will also increase about 34 percent in the 5 years (for a rate of about 6 percent annually). In this, significant increases should be expected in the consumption of durable goods and mass consumption products.

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CSO: 2800

DATA ON FOREIGN TRADE, TRANSPORTATION, 1974-1978, OUTLINED

Belgrade ZELEZNICE in Serbo-Croatian Sep 79 pp 19-32

[Article by Savo Vasiljevic, Master of Economics]

[Excerpts] The Share of Individual Countries in Total Exports and Imports According to value indices, Yugoslavia's most important export partners are the USSR, Italy, West Germany, Czechoslovakia, the GDR, Greece and Hungary. The share of these countries in total Yugoslav imports in 1978 was as follows:

- | | |
|------------------------|-----------------------------|
| 1. Italy 9 percent | 5. Czechoslovakia 4 percent |
| 2. The USSR 25 percent | 6. The GDR 4 percent |
| 3. The FRG 8 percent | 7. Greece 3 percent |
| 4. Hungary 2 percent | |

Among these countries the most important Yugoslav export partners were Italy, the USSR and the FRG.

The share of individual countries in total imports of goods in 1978 was as follows:

- | | |
|------------------------|-----------------------------|
| 1. Italy 8 percent | 4. Czechoslovakia 4 percent |
| 2. The USSR 14 percent | 5. Hungary 3 percent |
| 3. The FRG 18 percent | |

Again, in imports of goods the most important countries were Italy, the USSR and the FRG.

The most goods imported into Yugoslavia come from the FRG. It is typical for the value of imports to exceed the value of exports from Yugoslavia to the FRG. This factor has a significant impact on the balance of trade deficit. The value of imports from the FRG is nearly 4 times greater than the values of exports to that country.

The Structure of Imports and Exports

In the total exports of goods the largest shares go to products of metal processing, electrical machines, machine building products, ship building, and food processing products.

The structure of trade between Yugoslavia and foreign countries is constantly changing. In a very short time, Yugoslavia has changed from being an exporter of raw materials and products of primary processing of ores, forest products and agriculture, to an exporter of highly technical industrial products.

In the foreign trade with the FRG, exports are dominated by products of the metals industries, such as rolled and cast steel, sheet metals and lamps, followed by shoes, clothing and agricultural products; among imports are products of the metals and electrical industries (such as equipment but also to a large degree spare parts), chemical products, products of ferrous metallurgy, and textiles.

The most important exports to Italy are products of the lumber industry, including cut lumber and pulp wood, and agricultural products such as fresh meat and cattle, while imports include various equipment and production materials, chemical products (plastics and synthetic fibers), textiles, etc.

Exports to Austria include agricultural and food processing products (such as fresh fruits and canned foods), nonferrous metals (lead and lead products), and textiles, while imports are electrical machines and devices plastics, cellulose, etc.

II. Quantitative Indicators

Trends in Total Exports and Imports

According to the statistical data of the Federal Statistical Office (The Statistics of Foreign Trade for 1978), in the past 5 years (1974-1978) the physical volume of exports and imports has been very variable. In one or two categories the volume has showed an increase from the previous year, then the volume has declined in the following year or years, in both exports and imports.

For example, it is typical that the volume of exported goods in 1974, when a total of 9.6 million tons of goods were exported, has not been matched or exceeded in any year since except for 1977. Thus in terms of volume, exports of goods for the 5 years together have been stagnant.

The opposite can be concluded regarding imported volume of goods. In 1974, about 26.3 million tons were imported, while 5 years later that quantity had increased to 28.9 million tons, or by about 9 percent (2.5 million tons more). Within the 5-year period, however, imports declined in some years, as for example in 1975 and 1976 when compared to 1974.

Volume trends in exports and imports of goods in the last 5 years are seen in the following table:

Year	thousand tons	Exports Index	Percent	thousand tons	Imports Index	Percent
1974	9,637	---	100	26,374	---	100
1975	7,798	91	81	23,865	90.5	91
1976	9,239	118.4	96	23,910	100.1	91
1977	9,662	104.5	100	27,288	114.1	103
1978	9,530	98.6	99	28,876	105.8	109

In 1974 the quantity of imported goods was about 2.7 times that of the quantity of exported goods. Five years later, the gap between exports and imports was even greater, with imports being more than 3 times greater than exports.

The largest quantities of goods are exported to Italy, the USSR, Romania, Austria and the FRG. Of the total exported goods in 1978 25.7 percent went to Italy, 16.6 percent to the Soviet Union, 6.6 percent to Romania, 5.1 percent to Austria, and 4.8 percent to the FRG.

In considering trends in the share of total exports to the indicated countries in the past 5 years, however, constant changes are discerned. With certain countries the share of exports are steady or decline, while with other countries the opposite tendency is seen. The following data illustrate the situation:

Country	1974	1975	1976	1977	1978
Austria	8.8	6.8	6.5	5.5	5.1
Czechoslovakia	3.5	5.4	4.5	3.5	3.4
The GDR	2.2	3.2	2.9	2.2	2.7
Italy	22.1	19.5	22.1	24.6	25.7
Hungary	4.8	3.6	2.9	3.2	3.4
Poland	2.3	2.6	2.3	2.7	2.9
The FRG	9.3	5.9	6.6	5.5	4.8
The USSR	12.5	21.4	14.8	12.6	10.6

It will be noticed that exports to Austria are steadily smaller from year to year, declining from 8.8 percent in 1974 to 5.1 percent in 1978, a decrease of about 42 percent. With Italy, which in regards to quantity is practically the most important export partner, the share has increased from year to year. In the period from 1974 to 1978 it has increased from 22.1 percent to 25.7 percent, or by 16 percent. With other countries, however, such as the FRG, Czechoslovakia, Hungary and others, which are also significant trading partners in exports, the annual share of exports has fluctuated from year to year.

Among other things, 1978 exports to Italy included about 738,000 tons of wood and pulp, 27,000 tons of iron alloys, 14,000 tons of meat, 43,000 tons of live animals, and 9,000 tons of furniture. Shipments to the USSR

included 350,000 tons of ores and minerals, 34,000 tons of various machines, 31,000 tons of lead and lead products, 32,000 tons of steel, 10,000 tons of furniture, and 9,000 tons of fruit. Exports to Austria included 97,000 tons of pulp, 11,000 tons of iron alloys, 6,000 tons of lead and lead products, and 5,000 tons of fruits. The FRG received exports of 31,000 tons of wine, 26,000 tons of steel products, 12,000 tons of furniture, etc.

The largest amounts of goods were imported from the USSR, Czechoslovakia, Hungary, Italy, Romania, and the FRG. Of total imports by quantity in 1978 34 percent came from the USSR, 6.4 percent from Czechoslovakia, 4.4 percent from Hungary, 3.6 percent from Italy, 3.5 percent from Romania, and 3.2 percent from the FRG.

Trends in the participation of various countries in total imports are seen in the following table:

Country	1974	1975	1976	1977	1978
Austria	3.0	2.4	1.3	1.3	1.0
Czechoslovakia	6.1	6.5	6.1	5.9	6.4
Italy	4.8	5.1	3.6	3.0	3.6
Hungary	3.1	2.8	3.9	4.7	4.4
The GDR	1.7	1.9	2.7	3.1	2.5
The FRG	3.9	4.0	3.5	3.2	3.2
Poland	2.6	3.4	2.2	2.4	2.4
Romania	5.1	3.6	4.8	3.2	3.5
The USSR	26.3	28.6	30.9	34.9	34.0

The share of individual countries in total imports of goods is similar to trends in export shares in that it varies from year to year.

Among other things, in 1978 Yugoslavia imported from the USSR 5.4 million tons of crude oil, 2 million tons of coal and coke, 388,000 tons of crude iron and scrap iron, 352,000 tons of fertilizers, 90,000 tons of machinery and equipment, 88,000 tons of raw cotton, 29,000 tons of rubber, etc. From Czechoslovakia came 40,000 tons of steel plates, wires and pipes, 27,000 tons of rolled and cast steel, 21,000 tons of machines and equipment, 17,000 tons of plastics, and other items. Italy supplied 58,000 tons of electrical machines and equipment, 40,000 tons of other machines and equipment, 39,000 tons of metal plates, 28,000 tons of plastics, 14,000 tons of rolled and cast steel, etc. The FRG exported 89,000 tons of metal plates, wires and pipes, 63,000 tons of plastics, 74,000 tons of machines and equipment, and 27,000 tons of rolled and cast steel.

The Relative Participation of Transportation Branches in Total Imports and Exports

According to the publication Statistics of Foreign Trade, in 1977 Yugoslavia exported 9.6 million tons and imported 27.3 million tons of goods. According to data in the bulletin "Transportation and Communications for

1977," however, which presents the work of various branches of transportation and transportation organizations, there are certain differences to be noted in the total exports and imports of goods. In 1977 (which is the year considered since there are not data yet for 1978 as the bulletin SAOBRAČAJ I VEZE appears with a delay of more than a year), all branches of transportation together exported about 10.9 million tons, and imported 28.1 million tons of goods. Thus a difference appears of 1.3 million tons of exports and 700,000 tons of imports. This difference appeared in part from the fact that the transportation statistics records in its carriage goods from exports and imports that represent foreign goods being processed in Yugoslavia, as well as domestic goods that are processed abroad; these cannot be regarded as exports or imports. In addition, the transportation statistics include the gross weight of goods (net weight as well as packing materials), while the Statistics of Foreign Trade shows only net weight. Figures below are in thousand tons.

Transportation Branch	Exports					Imports				
	1974	1975	1976	1977	1978	1974	1975	1976	1977	1978
Railroads	4,696	3,886	4,645	4,751	4,872	10,562	8,600	7,999	8,774	9,184
Highways	1,529	1,319	1,520	1,480	---	1,836	1,647	1,605	1,752	
Rivers	1,324	1,240	1,211	1,107	---	4,553	4,628	4,668	5,070	
Maritime	3,085	2,396	2,794	3,518	---	10,514	9,644	10,931	12,512	
TOTALS	10,634	8,614	10,170	10,864	---	27,492	24,519	25,503	28,108	

Despite these differences, for this analysis and to establish the share of transportation branches in the total exports and imports of goods, the data of the bulletin SAOBRAČAJ I VEZE will be used here since it is the only source containing data for all transportation branches.

The volume of goods shipped for exports and imports according to transportation branches is shown in the table above.

Trends in exports of goods according to transportation branches reveal no particular changes. The volume of exported goods was more or less the same from year to year. That is seen particularly in the fact that the railroads shipped about 4.7 million tons in 1974 and the same 4.7 in 1977, highway transportation shipped 1.5 million tons in both years, river shipping also was similar with 1.3 million tons in 1974 and 1.1 million tons in 1977, and maritime shipping carried 3.1 million tons in 1974 and 3.5 million tons in 1977.

Trends in shipping imports show some differences. The import shipping by railroads and highways in 1977 showed a decrease from 1974, while river and maritime shipping showed increases. In 1974 the railroads handled 10.5 million tons of imports, while in 1977 the figure was 8.7 million tons (in 1978 it was 9.2); highway shipping accounted for 1.9 million tons in 1974 and 1.6 million in 1977. River shipping, on the other hand, increased from 4.5 to 5.1 million tons over the period, and maritime shipping from 10.5 to 12.5 million tons.

The share of transportation branches in total exports and imports from 1974 to 1977 can be seen in the following data:

Transportation Branch	Exports				Imports			
	1974	1975	1976	1977	1974	1975	1976	1977
Railroads	44	43	46	44	38	35	31	31
Highways	14	15	15	14	7	7	6	6
River shipping	13	14	12	10	17	19	20	18
Maritime shipping	29	28	27	32	38	39	43	45

In total shipping for export the railroads handled about 44 percent, the highways about 15 percent, river shipping from 10 to 14 percent, and maritime shipping from 27 to 32 percent.

The share of the railroads in total shipping of imports, however, has shown a tendency toward stagnation or decline (falling from 38 percent to 31 percent). A similar trend is seen for highway and river shipping, although these declines are more moderate, while the share of maritime shipping in the total shipping of imports has tended to increase (going from 38 to 45 percent).

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Trends in Exports and Imports of Transportation Branches by Country

a. Exports

Of the total goods shipped for exports in 1977, 10.8 million tons, the six most important export partners (Austria, Czechoslovakia, Italy, Hungary, Germany and the USSR) received 6.3 million tons by all transportation means, or 50.8 percent of the total shipped.

A survey by country follows:

Austria

The railroads carried 452,000 tons of export goods to Austria, or 65 percent of the total exports to that country. The main exports consisted of solid fuels--177,000 tons, along with 105,000 tons of wood and lumber, 31,000 tons of processed foods, 26,000 tons of metals, and 9,000 tons of fresh fruits and vegetables.

Highway shipping to Austria accounted for 99,000 tons, or 14 percent of the total shipped goods for export. The exporting of that quantity involved the use of more than 10,000 vehicles, of which somewhat more than 3,000 were domestically owned and about 7,000 were foreign.

River shipping to Austria in 1977 handled 143,000 tons of various goods, or about 21 percent of the total exports. The major commodities were ores and concentrates, totalling 93,000 tons, followed by iron ore and nonferrous metals with 20,000 tons, 18,000 tons of grain, and 6,000 tons of oil and petroleum products.

Czechoslovakia

Total exports to Czechoslovakia in 1977 amounted to 413,000 tons of goods. Of that amount, 303,000 tons, or 73 percent was shipped by rail, 9,000 tons or only 3 percent by highway, and 101,000 by river, which was 24 percent of the total exports.

In terms of types of commodities, the railroads hauled 51,000 tons of ore and concentrates, 77,000 tons of metals, 36,000 tons of chemical products, 20,000 tons of fresh fruits and vegetables, and 18,000 tons of raw materials of mineral and nonmetallic nature.

For exports of 9,000 tons of goods by highway, about 3,300 trucks were used, of which 2,600 were domestically owned and 700 were foreign.

River shipping to Czechoslovakia carried 95,000 tons of ore and nonferrous metal concentrates.

Hungary

A total of 633,000 tons was exported to Hungary, of which 506,000 tons, or 80 percent, went by rail, 44,000 tons or 7 percent by highway, and 83,000 tons or 13 percent by river shipping.

The railroads hauled 93,000 tons of grain, 47,000 tons of raw materials of mineral and nonmetallic nature, 50,000 tons of metals, 23,000 tons of iron ore, and 22,000 tons of chemical products.

For carrying 44,000 tons in highway shipping 6,300 trucks were used, of which 2,700 were domestically owned and 3,600 were foreign.

River shipping carried 33,000 tons of iron ore, 38,000 tons of oil and petroleum products, 8,000 tons of grain, and 4,000 tons of ore and concentrates for nonferrous metals.

Italy

Total exports to Italy amounted to 2.7 million tons, making it Yugoslavia's most important export partner when measured by volume of exported goods. Of this total 1.3 million tons, or 48 percent, were shipped by rail, 756,000 tons or 28 percent by highway, and 646,000 tons or 24 percent by maritime shipping.

Among other commodities the railroads carried 790,000 tons of wood and pulp, 63,000 tons of various processed food, 47,000 tons of solid fuels, 40,000 tons of cement and similar products, 42,000 tons of metals, 23,000 tons of fresh fruits and vegetables, etc.

Transportation of 756,000 tons by highway involved 43,700 trucks, of which more than 17,000 were domestic and 26,500 were of foreign ownership.

Maritime shipping to Italy carried 505,000 tons of oil and petroleum products, 93,000 tons of wood and pulp, 16,000 tons of metals, and 10,000 tons of cement.

The Federal Republic of Germany

Exports to the FRG totalled 618,000 tons of various goods, of which 213,000 tons or 24 percent went by rail, 195,000 or 31 percent by highway, 169,000 tons or 27 percent by river carriers and 40,000 tons or 8 percent by maritime shipping.

The railroads carried 16,000 tons of processed food products, 14,000 tons of cement, 18,000 tons of machines and equipment, and 10,000 tons each of wood and raw materials of a nonmetallic nature.

For transporting 195,000 tons on the highways more than 44,000 domestic and foreign trucks were used.

River shipping carried 41,000 tons of grain, 46,000 tons of iron ore, 41,000 tons of fertilizers, 20,000 tons of processed food products, etc.

Maritime transport handled 41,000 tons of ores and concentrates.

The USSR

Exports to the USSR totalled 1.2 million tons of goods, or 11.4 percent of total exports. Of that total 464,000 or 38 percent were shipped by rail, 16,000 or 2 percent by highway, 521,000 tons or 43 percent by river carriers, and 209,000 tons or 17 percent by maritime shipping.

The railroads hauled 70,000 tons of grain, 93,000 tons of metal, 46,000 tons of machines and equipment, 21,000 tons of fresh fruits and vegetables, and 17,000 tons of wood.

The shipment of 16,000 tons by highway involved about 7,500 domestic and foreign trucks.

River carriers handled 435,000 tons of iron and scrap iron, 36,000 tons of metals, etc.

Maritime shipping carried 162,000 tons of ores and concentrates, 31,000 tons of chemical products, and 9,000 tons of metals.

b. Imports

Of total exports in 1977 of 28.1 million tons, the 6 most important countries by volume (Austria, Czechoslovakia, Italy, Hungary, Germany and the USSR) supplied 14.4 million tons or 51 percent of the total imports.

Imports according to commodities and countries are reflected below.

Austria

Imports from Austria amounted to 447,000 tons, of which 317,000 tons or 71 percent were shipped by rail, 84,000 tons or 19 percent by highway, and 46,000 tons or 10 percent by river haulers.

The railroads carried 41,000 tons of chemical products, 38,000 tons of cement, 32,000 tons of metals, 18,000 tons of various raw materials, 15,000 tons of machines and transportation equipment, etc.

Imports of 84,000 tons of goods by highway involved 14,600 domestic and foreign trucks.

River shipping carried 31,000 tons of iron ore, 12,000 tons of metals, etc.

Czechoslovakia

From Czechoslovakia a total of 1.6 million tons of goods were imported, of which 1.5 million or 93.5 percent were carried by rail, 8,000 tons or 0.5 percent by highway, and 91,000 tons or 6 percent by river shipping.

Among other commodities the railroads imported 479,000 tons of solid fuels, 157,000 tons of cement and related products, 390,000 tons of metals, 147,000 tons of wood, 89,000 tons of chemical products, and 52,000 tons of machines and transportation equipment.

Shipping of the small amount imported by highway involved about 2,000 trucks.

Italy

The total imports from Italy amounted to one million tons. Of that amount, 356,000 tons or 35 percent was handled by rail, 238,000 tons or 24 percent by highway, and 420,000 tons or 41 percent by maritime carriers.

The railroads carried 69,000 tons of chemical products, 29,000 tons of metals, 38,000 tons of machines and transportation equipment, 26,000 tons of fertilizers, and 24,000 tons of various processed food products.

Imports of 238,000 tons by highway involved more than 62,000 trucks of domestic and foreign ownership.

Maritime shipping handled 182,000 tons of chemical products, 45,000 tons of metals, 35,000 tons of chemical products, and 23,000 tons of solid fuels.

Hungary

Imports from Hungary totalled about 1.5 million tons, of which 1.2 million or 79 percent were moved by rail, 190,000 tons or 13 percent by highway, and 117,000 tons or 8 percent by river carriers.

Among other things, the railroads imported 254,000 tons of cement and other minerals, 179,000 tons of wood, 176,000 tons of metals, 166,000 tons of chemical products, 61,000 tons of various processed food products, and 56,000 tons of oil and petroleum products.

To transport 190,000 tons on the highways, 5,800 domestic and foreign trucks were used.

River shipping carried 73,000 tons of nonmetallic raw materials and other minerals, and 34,000 tons of oil and petroleum products.

The USSR

Imports from the USSR amounted to more than 9 million tons, of which 1.3 million or 15 percent were carried by rail, 408,000 tons or 5 percent by highway, 3.5 million or 39 percent by river carriers, and 3.7 million tons or 41 percent by maritime shipping. The railroads carried 340,000 tons of wood, 238,000 tons of fertilizer, 200,000 tons of solid fuels, 101,000 tons of cement and related products, 95,000 tons of assorted raw materials, and 69,000 tons of chemical products.

The imports of 408,000 tons by highway involved about 3,500 domestic and foreign trucks.

River carriers carried imports of 2.3 million tons of crude oil, 657,000 tons of solid fuels, 337,000 tons of iron ore and scrap iron, 67,000 tons of metals, and 49,000 tons of ores and nonferrous metal concentrates.

Maritime shipping from the Soviet Union imported about 2 million tons of crude oil, a million tons of solid fuels, 414,000 tons of iron ore and scrap iron, 78,000 tons of wood, and 67,000 tons of metals.

The Federal Republic of Germany

A total of 818,000 tons was imported from the FRG, of which 584,000 tons or 71 percent moved by rail, 222,000 tons or 27 percent by highway, and 12,000 tons or 2 percent by river shipping.

The railroads imported 174,000 tons of chemical products, 111,000 tons of metals, 22,000 tons of mineral and nonmetallic raw materials, 22,000 tons of various processed food products, and 82,000 tons of machines and transportation equipment.

Imports of 222,000 tons by highway utilized more than 124,000 domestic and foreign trucks.

River carriers hauled 6,000 tons of iron ore and scrap iron, and 3,000 tons of fertilizer.

CUSTOMS DUTIES LOWERED FOR PRODUCTION EQUIPMENT

[Editorial Report] The 21 December 1979 issue of the Yugoslav legal gazette, SLUZBENI LIST SFRJ (Belgrade, pp 1877-1900), publishes decisions on lowering customs duties (generally by 5 percent), for a large number and variety of production equipment for: coal mines, coal-fired thermoelectric power plants, hydroelectric power plants, nuclear power plants, electric transmission and transformers, gas and oil exploration, production, and processing, including the exploitation of shale, iron mines and ferrous metallurgical production, rolling mills, non-ferrous mining and metallurgy, non-metallurgical mining, the basic chemical industry, agricultural crops, livestock raising, tourism, rail, air, and sea transport (including shipbuilding, port facilities, airport equipment), communications, solar and geothermal energy, water management, geological research, coke production, refractory material production, and environmental protective equipment.

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